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McLAREN, MARGARET

<120> METHODS AND COMPOSITIONS FOR DETECTING AND TREATING RETINAL
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<141> 2004-02-09

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<212> DNA

<213> Homo sapiens

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<211> 1679

<212> DNA

<213> Homo sapiens

<400> 13

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<210> 14

<211> 1962

<212> DNA

<213> Homo sapiens

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<211> 2365

<212> DNA

<213> Homo sapiens

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<211> 8595

<212> DNA

<213> Homo sapiens

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<211> 1026

<212> DNA

<213> Homo sapiens

<400> 67

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<212> DNA
<213> Homo sapiens

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<210> 69
<211> 2395
<212> DNA
<213> Homo sapiens

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<400> 69

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<210> 70
<211> 74
<212> PRT
<213> Homo sapiens

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Leu Leu Ser Tyr Ile Leu Arg Tyr Gln Leu Leu Phe Phe Lys Phe Val
          20          25          30

Phe Ile Leu Phe Asp Lys Lys Pro Ala Leu Ala Thr His Thr His Asn
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Lys Ser His Phe Lys Ile Val Ala Gln Thr Pro Arg Lys Lys Arg Lys
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Glu Lys Leu Glu Gln Gln Gln Gln Lys Asn
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<210> 71
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<212> PRT
<213> Homo sapiens

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<400> 71

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Ser Ala Arg Asn Ile Gly Trp
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<210> 72

<211> 52

<212> PRT

<213> Homo sapiens

<400> 72

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Tyr Glu Leu Leu Tyr Asn Ser Tyr Ser Tyr Leu Ala Asn Ala Gln Phe
 20 25 30

Ser Ile Thr Ser Leu Met Ala Phe Thr Arg Lys Ala Val Leu Glu Ala
 35 40 45

Ile Val Ile His
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<210> 73

<211> 45

<212> PRT

<213> Homo sapiens

<400> 73

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Leu Leu Arg Asn Val Gln Met Ile Leu Tyr Ser Thr Thr Leu Val Pro
 20 25 30

Leu Cys Met Thr Val Arg Phe Phe Phe Phe Leu Leu Phe
 35 40 45

<210> 74
 <211> 43
 <212> PRT
 <213> Homo sapiens

<400> 74
 Met Asp Arg Glu Asn Gln Ile Ser Ser Tyr Asn Cys Leu Ala Asn Gly
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Ile Ser Gly Ser Phe Ser Ala Ser His Phe Arg Leu His Ser Leu Thr
 20 25 30

Leu Leu His Phe Lys Ile Pro Ala Phe Ile Phe
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<210> 75
 <211> 37
 <212> PRT
 <213> Homo sapiens

<400> 75
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Cys Leu Val Ser Leu Trp Thr Gly Thr Val Asp Ala His Leu Lys Val
 20 25 30

Lys Cys His Phe Phe
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<210> 76
 <211> 35
 <212> PRT
 <213> Homo sapiens

<400> 76
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Thr Gly Asn Leu Phe Met Ser Leu Tyr Leu Lys Pro Val Leu Leu Ser
 20 25 30

Val Val Leu
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<210> 77
 <211> 34

<212> PRT

<213> Homo sapiens

<400> 77

Met Ile Tyr Phe Leu Lys Ser Asn Phe Asn Ser Ser Cys Leu Thr Glu
1 5 10 15

Ala Cys Gln Tyr Met Cys Cys Ile Phe Phe Ala Phe Val Glu Lys Leu
20 25 30

His Ile

<210> 78

<211> 34

<212> PRT

<213> Homo sapiens

<400> 78

Met Pro Arg Ala Ile Val Phe Pro Pro Phe Phe Ala Ser Phe Ser Tyr
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Pro Leu Phe Gln Leu Gln Met Pro Lys Lys Met Pro Thr Asp Thr Thr
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Leu Pro

<210> 79

<211> 190

<212> PRT

<213> Homo sapiens

<400> 79

Met Ala Thr His His Thr Leu Trp Met Gly Leu Ala Leu Leu Gly Val
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Leu Gly Asp Leu Gln Ala Ala Pro Glu Ala Gln Val Ser Val Gln Pro
20 25 30

Asn Phe Gln Gln Asp Lys Phe Leu Gly Arg Trp Phe Ser Ala Gly Leu
35 40 45

Ala Ser Asn Ser Ser Trp Leu Arg Glu Lys Lys Ala Ala Leu Ser Met
50 55 60

Cys Lys Ser Val Val Ala Pro Ala Thr Asp Gly Gly Leu Asn Leu Thr
65 70 75 80

Ser Thr Phe Leu Arg Lys Asn Gln Cys Glu Thr Arg Thr Met Leu Leu
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Gln Pro Ala Gly Ser Leu Gly Ser Tyr Ser Tyr Arg Ser Pro His Trp
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Gly Ser Thr Tyr Ser Val Ser Val Val Glu Thr Asp Tyr Asp Gln Tyr
115 120 125

Ala Leu Leu Tyr Ser Gln Gly Ser Lys Gly Pro Gly Glu Asp Phe Arg
130 135 140

Met Ala Thr Leu Tyr Ser Arg Thr Gln Thr Pro Arg Ala Glu Leu Lys
145 150 155 160

Glu Lys Phe Thr Ala Phe Cys Lys Ala Gln Gly Phe Thr Glu Asp Thr
165 170 175

Ile Val Phe Leu Pro Gln Thr Asp Lys Cys Met Thr Glu Gln
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<210> 80

<211> 170

<212> PRT

<213> Homo sapiens

<400> 80

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Ala Thr Ala Ser Thr Met Asp His Ala Arg His Gly Phe Leu Pro Arg
20 25 30

His Arg Asp Thr Gly Ile Leu Asp Ser Ile Gly Arg Phe Gly Gly Asp
35 40 45

Arg Gly Ala Pro Lys Arg Gly Ser Gly Lys Asp Ser His His Pro Ala
50 55 60

Arg Thr Ala His Tyr Gly Ser Leu Pro Gln Lys Ser His Gly Arg Thr
65 70 75 80

Gln Asp Glu Asn Pro Val Val His Phe Phe Lys Asn Ile Val Thr Pro
 85 90 95

Arg Thr Pro Pro Pro Ser Gln Gly Lys Gly Arg Gly Leu Ser Leu Ser
 100 105 110

Arg Phe Ser Trp Gly Ala Glu Gly Gln Arg Pro Gly Phe Gly Tyr Gly
 115 120 125

Gly Arg Ala Ser Asp Tyr Lys Ser Ala His Lys Gly Phe Lys Gly Val
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Asp Ala Gln Gly Thr Leu Ser Lys Ile Phe Lys Leu Gly Gly Arg Asp
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Ser Arg Ser Gly Ser Pro Met Ala Arg Arg
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<210> 81
 <211> 38
 <212> PRT
 <213> Homo sapiens

<400> 81
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 1 5 10 15

Pro Gln Ile Asn Arg Cys Glu Cys Ser Phe Phe Pro Leu Cys Glu Glu
 20 25 30

Ala Val Thr Pro Gln Gln
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<210> 82
 <211> 38
 <212> PRT
 <213> Homo sapiens

<400> 82
 Leu Leu Gly Cys Asn Cys Phe Phe Thr Gln Gly Glu Lys Thr Thr Phe
 1 5 10 15

Thr Ser Val Tyr Leu Arg Thr Gln Cys Arg Val Gln Ala Ala Lys Pro
 20 25 30

Gln Leu Ser Arg Ser Asn
35

<210> 83
<211> 37
<212> PRT
<213> Homo sapiens

<400> 83
Phe Ile Tyr Lys Lys Ile Lys Leu Glu Ile Val Leu Asp Phe Ser Ser
1 5 10 15

Tyr Cys Trp Gly Val Thr Ala Ser Ser His Arg Gly Lys Lys Leu His
20 25 30

Ser His Arg Phe Ile
35

<210> 84
<211> 335
<212> PRT
<213> Homo sapiens

<400> 84
Met Gly Ala Ser Ser Ser Ala Leu Ala Arg Leu Gly Leu Pro Ala
1 5 10 15

Arg Pro Trp Pro Arg Trp Leu Gly Val Ala Ala Leu Gly Leu Ala Ala
20 25 30

Val Ala Leu Gly Thr Val Ala Trp Arg Arg Ala Trp Pro Arg Arg Arg
35 40 45

Arg Arg Leu Gln Gln Val Gly Thr Val Ala Lys Leu Trp Ile Tyr Pro
50 55 60

Val Lys Ser Cys Lys Gly Val Pro Val Ser Glu Ala Glu Cys Thr Ala
65 70 75 80

Met Gly Leu Arg Ser Gly Asn Leu Arg Asp Arg Phe Trp Leu Val Ile
85 90 95

Lys Glu Asp Gly His Met Val Thr Ala Arg Gln Glu Pro Arg Leu Val
100 105 110

Leu Ile Ser Ile Ile Tyr Glu Asn Asn Cys Leu Ile Phe Arg Ala Pro
 115 120 125

Asp Met Asp Gln Leu Val Leu Pro Ser Lys Gln Pro Ser Ser Asn Lys
 130 135 140

Leu His Asn Cys Arg Ile Phe Gly Leu Asp Ile Lys Gly Arg Asp Cys
 145 150 155 160

Gly Asn Glu Ala Ala Lys Trp Phe Thr Asn Phe Leu Lys Thr Glu Ala
 165 170 175

Tyr Arg Leu Val Gln Phe Glu Thr Asn Met Lys Gly Arg Thr Ser Arg
 180 185 190

Lys Leu Leu Pro Thr Leu Asp Gln Asn Phe Gln Val Ala Tyr Pro Asp
 195 200 205

Tyr Cys Pro Leu Leu Ile Met Thr Asp Ala Ser Leu Val Asp Leu Asn
 210 215 220

Thr Arg Met Glu Lys Lys Met Lys Met Glu Asn Phe Arg Pro Asn Ile
 225 230 235 240

Val Val Thr Gly Cys Asp Ala Phe Glu Glu Asp Thr Trp Asp Glu Leu
 245 250 255

Leu Ile Gly Ser Val Glu Val Lys Lys Val Met Ala Cys Pro Arg Cys
 260 265 270

Ile Leu Thr Thr Val Asp Pro Asp Thr Gly Val Ile Asp Arg Lys Gln
 275 280 285

Pro Leu Asp Thr Leu Lys Ser Tyr Arg Leu Cys Asp Pro Ser Glu Arg
 290 295 300

Glu Leu Tyr Lys Leu Ser Pro Leu Phe Gly Ile Tyr Tyr Ser Val Glu
 305 310 315 320

Lys Ile Gly Ser Leu Arg Val Gly Asp Pro Val Tyr Arg Met Val
 325 330 335

<210> 85
 <211> 459
 <212> PRT
 <213> Homo sapiens

<400> 85

Met Ile Lys Arg Phe Leu Glu Asp Thr Thr Asp Asp Gly Glu Leu Ser
 1 5 10 15

Lys Phe Val Lys Asp Phe Ser Gly Asn Ala Ser Cys His Pro Pro Glu
 20 25 30

Ala Lys Thr Trp Ala Ser Arg Pro Gln Val Pro Glu Pro Arg Pro Gln
 35 40 45

Ala Pro Asp Leu Tyr Asp Asp Asp Leu Glu Phe Arg Pro Pro Ser Arg
 50 55 60

Pro Gln Ser Ser Asp Asn Gln Gln Tyr Phe Cys Ala Pro Ala Pro Leu
 65 70 75 80

Ser Pro Ser Ala Arg Pro Arg Ser Pro Trp Gly Lys Leu Asp Pro Tyr
 85 90 95

Asp Ser Ser Glu Asp Asp Lys Glu Tyr Val Gly Phe Ala Thr Leu Pro
 100 105 110

Asn Gln Val His Arg Lys Ser Val Lys Lys Gly Phe Asp Phe Thr Leu
 115 120 125

Met Val Ala Gly Glu Ser Gly Leu Gly Lys Ser Thr Leu Val Asn Ser
 130 135 140

Leu Phe Leu Thr Asp Leu Tyr Arg Asp Arg Lys Leu Leu Gly Ala Glu
 145 150 155 160

Glu Arg Ile Met Gln Thr Val Glu Ile Thr Lys His Ala Val Asp Ile
 165 170 175

Glu Glu Lys Gly Val Arg Leu Arg Leu Thr Ile Val Asp Thr Pro Gly
 180 185 190

Phe Gly Asp Ala Val Asn Asn Thr Glu Cys Trp Lys Pro Val Ala Glu
 195 200 205

Tyr Ile Asp Gln Gln Phe Glu Gln Tyr Phe Arg Asp Glu Ser Gly Leu
 210 215 220

Asn Arg Lys Asn Ile Gln Asp Asn Arg Val His Cys Cys Leu Tyr Phe
 225 230 235 240

Ile Ser Pro Phe Gly His Gly Leu Arg Pro Leu Asp Val Glu Phe Met
 245 250 255

Lys Ala Leu His Gln Arg Val Asn Ile Val Pro Ile Leu Ala Lys Ala
 260 265 270

Asp Thr Leu Thr Pro Pro Glu Val Asp His Lys Lys Arg Lys Ile Arg
 275 280 285

Glu Glu Ile Glu His Phe Gly Ile Lys Ile Tyr Gln Phe Pro Asp Cys
 290 295 300

Asp Ser Asp Glu Asp Glu Asp Phe Lys Leu Gln Asp Gln Ala Leu Lys
 305 310 315 320

Glu Ser Ile Pro Phe Ala Val Ile Gly Ser Asn Thr Val Val Glu Ala
 325 330 335

Arg Gly Arg Arg Val Arg Gly Arg Leu Tyr Pro Trp Gly Ile Val Glu
 340 345 350

Val Glu Asn Pro Gly His Cys Asp Phe Val Lys Leu Arg Thr Met Leu
 355 360 365

Val Arg Thr His Met Gln Asp Leu Lys Asp Val Thr Arg Glu Thr His
 370 375 380

Tyr Glu Asn Tyr Arg Ala Gln Cys Ile Gln Ser Met Thr Arg Leu Val
 385 390 395 400

Val Lys Glu Arg Asn Arg Asn Lys Leu Thr Arg Glu Ser Gly Thr Asp
 405 410 415

Phe Pro Ile Pro Ala Val Pro Pro Gly Thr Asp Pro Glu Thr Glu Lys
 420 425 430

Leu Ile Arg Glu Lys Asp Glu Glu Leu Arg Arg Met Gln Glu Met Leu
 435 440 445

His Lys Ile Gln Lys Gln Met Lys Glu Asn Tyr
 450 455

<210> 86
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 86
 Met Ala Thr Lys Ile Asp Lys Glu Ala Cys Arg Ala Ala Tyr Asn Leu
 1 5 10 15

Val Arg Asp Asp Gly Ser Ala Val Ile Trp Val Thr Phe Lys Tyr Asp
 20 25 30

Gly Ser Thr Ile Val Pro Gly Glu Gln Gly Ala Glu Tyr Gln His Phe
 35 40 45

Ile Gln Gln Cys Thr Asp Asp Val Arg Leu Phe Ala Phe Val Arg Phe
 50 55 60

Thr Thr Gly Asp Ala Met Ser Lys Arg Ser Lys Phe Ala Leu Ile Thr
 65 70 75 80

Trp Ile Gly Glu Asn Val Ser Gly Leu Gln Arg Ala Lys Thr Gly Thr
 85 90 95

Asp Lys Thr Leu Val Lys Glu Val Val Gln Asn Phe Ala Lys Glu Phe
 100 105 110

Val Ile Ser Asp Arg Lys Glu Leu Glu Glu Asp Phe Ile Lys Ser Glu
 115 120 125

Leu Lys Lys Ala Gly Gly Ala Asn Tyr Asp Ala Gln Thr Glu
 130 135 140

<210> 87
 <211> 449
 <212> PRT
 <213> Homo sapiens

<400> 87

Met Met Lys Thr Leu Leu Leu Phe Val Gly Leu Leu Leu Thr Trp Glu
 1 5 10 15

Ser Gly Gln Val Leu Gly Asp Gln Thr Val Ser Asp Asn Glu Leu Gln
 20 25 30

Glu Met Ser Asn Gln Gly Ser Lys Tyr Val Asn Lys Glu Ile Gln Asn
 35 40 45

Ala Val Asn Gly Val Lys Gln Ile Lys Thr Leu Ile Glu Lys Thr Asn
 50 55 60

Glu Glu Arg Lys Thr Leu Leu Ser Asn Leu Glu Glu Ala Lys Lys Lys
 65 70 75 80

Lys Glu Asp Ala Leu Asn Glu Thr Arg Glu Ser Glu Thr Lys Leu Lys
 85 90 95

Glu Leu Pro Gly Val Cys Asn Glu Thr Met Met Ala Leu Trp Glu Glu
 100 105 110

Cys Lys Pro Cys Leu Lys Gln Thr Cys Met Lys Phe Tyr Ala Arg Val
 115 120 125

Cys Arg Ser Gly Ser Gly Leu Val Gly Arg Gln Leu Glu Glu Phe Leu
 130 135 140

Asn Gln Ser Ser Pro Phe Tyr Phe Trp Met Asn Gly Asp Arg Ile Asp
 145 150 155 160

Ser Leu Leu Glu Asn Asp Arg Gln Gln Thr His Met Leu Asp Val Met
 165 170 175

Gln Asp His Phe Ser Arg Ala Ser Ser Ile Ile Asp Glu Leu Phe Gln
 180 185 190

Asp Arg Phe Phe Thr Arg Glu Pro Gln Asp Thr Tyr His Tyr Leu Pro
 195 200 205

Phe Ser Leu Pro His Arg Arg Pro His Phe Phe Phe Pro Lys Ser Arg
 210 215 220

Ile Val Arg Ser Leu Met Pro Phe Ser Pro Tyr Glu Pro Leu Asn Phe
 225 230 235 240

His Ala Met Phe Gln Pro Phe Leu Glu Met Ile His Glu Ala Gln Gln
 245 250 255

Ala Met Asp Ile His Phe His Ser Pro Ala Phe Gln His Pro Pro Thr
 260 265 270

Glu Phe Ile Arg Glu Gly Asp Asp Asp Arg Thr Val Cys Arg Glu Ile
 275 280 285

Arg His Asn Ser Thr Gly Cys Leu Arg Met Lys Asp Gln Cys Asp Lys
 290 295 300

Cys Arg Glu Ile Leu Ser Val Asp Cys Ser Thr Asn Asn Pro Ser Gln
 305 310 315 320

Ala Lys Leu Arg Arg Glu Leu Asp Glu Ser Leu Gln Val Ala Glu Arg
 325 330 335

Leu Thr Arg Lys Tyr Asn Glu Leu Leu Lys Ser Tyr Gln Trp Lys Met
 340 345 350

Leu Asn Thr Ser Ser Leu Leu Glu Gln Leu Asn Glu Gln Phe Asn Trp
 355 360 365

Val Ser Arg Leu Ala Asn Leu Thr Gln Gly Glu Asp Gln Tyr Tyr Leu
 370 375 380

Arg Val Thr Thr Val Ala Ser His Thr Ser Asp Ser Asp Val Pro Ser
 385 390 395 400

Gly Val Thr Glu Val Val Val Lys Leu Phe Asp Ser Asp Pro Ile Thr
 405 410 415

Val Thr Val Pro Val Glu Val Ser Arg Lys Asn Pro Lys Phe Met Glu
 420 425 430

Thr Val Ala Glu Lys Ala Leu Gln Glu Tyr Arg Lys Lys His Arg Glu
 435 440 445

Glu

<210> 88

<211> 416

<212> PRT

<213> Homo sapiens

<400> 88

Met Glu Leu Arg Val Gly Asn Lys Tyr Arg Leu Gly Arg Lys Ile Gly
 1 5 10 15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Ala Asn Ile Ala Ser Gly
 20 25 30

Glu Glu Val Ala Ile Lys Leu Glu Cys Val Lys Thr Lys His Pro Gln
 35 40 45

Leu His Ile Glu Ser Lys Phe Tyr Lys Met Met Gln Gly Gly Val Gly
 50 55 60

Ile Pro Ser Ile Lys Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met
 65 70 75 80

Val Met Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys
 85 90 95

Ser Arg Lys Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met
 100 105 110

Ile Ser Arg Ile Glu Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp
 115 120 125

Val Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu
 130 135 140

Val Tyr Ile Ile Asp Phe Gly Leu Ala Lys Lys Tyr Arg Asp Ala Arg
 145 150 155 160

Thr His Gln His Ile Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr
 165 170 175

Ala Arg Tyr Ala Ser Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg
 180 185 190

Arg Asp Asp Leu Glu Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu
 195 200 205

Gly Ser Leu Pro Trp Gln Gly Leu Lys Ala Ala Thr Lys Arg Gln Lys
 210 215 220

Tyr Glu Arg Ile Ser Glu Lys Lys Met Ser Thr Pro Ile Glu Val Leu
 225 230 235 240

Cys Lys Gly Tyr Pro Ser Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg
 245 250 255

Ser Leu Arg Phe Asp Asp Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu
 260 265 270

Phe Arg Asn Leu Phe His Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe
 275 280 285

Asp Trp Asn Met Leu Lys Phe Gly Ala Ala Arg Asn Pro Glu Asp Val
 290 295 300

Asp Arg Glu Arg Arg Glu His Glu Arg Glu Glu Arg Met Gly Gln Leu
 305 310 315 320

Arg Gly Ser Ala Thr Arg Ala Leu Pro Pro Gly Pro Pro Thr Gly Ala
 325 330 335

Thr Ala Asn Arg Leu Arg Ser Ala Ala Glu Pro Val Ala Ser Thr Pro
 340 345 350

Ala Ser Arg Ile Gln Pro Ala Gly Asn Thr Ser Pro Arg Ala Ile Ser
 355 360 365

Arg Val Asp Arg Glu Arg Lys Val Ser Met Arg Leu His Arg Gly Ala
 370 375 380

Pro Ala Asn Val Ser Ser Ser Asp Leu Thr Gly Arg Gln Glu Val Ser
 385 390 395 400

Arg Ile Pro Ala Ser Gln Thr Ser Val Pro Phe Asp His Leu Gly Lys
 405 410 415

<210> 89
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 89
 Met Thr Thr Ala Ser Thr Ser Gln Val Arg Gln Asn Tyr His Gln Asp
 1 5 10 15

Ser Glu Ala Ala Ile Asn Arg Gln Ile Asn Leu Glu Leu Tyr Ala Ser
 20 25 30

Tyr Val Tyr Leu Ser Met Ser Tyr Tyr Phe Asp Arg Asp Asp Val Ala
 35 40 45

Leu Lys Asn Phe Ala Lys Tyr Phe Leu His Gln Ser His Glu Glu Arg
 50 55 60

Glu His Ala Glu Lys Leu Met Lys Leu Gln Asn Gln Arg Gly Gly Arg
 65 70 75 80

Ile Phe Leu Gln Asp Ile Lys Lys Pro Asp Cys Asp Asp Trp Glu Ser
 85 90 95

Gly Leu Asn Ala Met Glu Cys Ala Leu His Leu Glu Lys Met
 100 105 110

<210> 90
 <211> 814
 <212> PRT
 <213> Homo sapiens

<400> 90
 Met Arg Leu Ala Leu Leu Trp Ala Leu Gly Leu Leu Gly Ala Gly Ser
 1 5 10 15

Pro Leu Pro Ser Trp Pro Leu Pro Asn Ile Gly Gly Thr Glu Glu Gln
 20 25 30

Gln Ala Glu Ser Glu Lys Ala Pro Arg Glu Pro Leu Glu Pro Gln Val
 35 40 45

Leu Gln Asp Asp Leu Pro Ile Ser Leu Lys Lys Val Leu Gln Thr Ser
 50 55 60

Leu Pro Glu Pro Leu Arg Ile Lys Leu Glu Leu Asp Gly Asp Ser His
 65 70 75 80

Ile Leu Glu Leu Leu Gln Asn Arg Glu Leu Val Pro Gly Arg Pro Thr
 85 90 95

Leu Val Trp Tyr Gln Pro Asp Gly Thr Arg Val Val Ser Glu Gly His
 100 105 110

Thr Leu Glu Asn Cys Cys Tyr Gln Gly Arg Val Arg Gly Tyr Ala Gly
 115 120 125

Ser Trp Val Ser Ile Cys Thr Cys Ser Gly Leu Arg Gly Leu Val Val
 130 135 140

Leu Thr Pro Glu Arg Ser Tyr Thr Leu Glu Gln Gly Pro Gly Asp Leu
 145 150 155 160

Gln Gly Pro Pro Ile Ile Ser Arg Ile Gln Asp Leu His Leu Pro Gly
 165 170 175

His Thr Cys Ala Leu Ser Trp Arg Glu Ser Val His Thr Gln Thr Pro
 180 185 190

Pro Glu His Pro Leu Gly Gln Arg His Ile Arg Arg Arg Arg Asp Val
 195 200 205

Val Thr Glu Thr Lys Thr Val Glu Leu Val Ile Val Ala Asp His Ser
 210 215 220

Glu Ala Gln Lys Tyr Arg Asp Phe Gln His Leu Leu Asn Arg Thr Leu
 225 230 235 240

Glu Val Ala Leu Leu Leu Asp Thr Phe Phe Arg Pro Leu Asn Val Arg
 245 250 255

Val Ala Leu Val Gly Leu Glu Ala Trp Thr Gln Arg Asp Leu Val Glu
 260 265 270

Ile Ser Pro Asn Pro Ala Val Thr Leu Glu Asn Phe Leu His Trp Arg
 275 280 285

Arg Ala His Leu Leu Pro Arg Leu Pro His Asp Ser Ala Gln Leu Val
 290 295 300

Thr Gly Thr Ser Phe Ser Gly Pro Thr Val Gly Met Ala Ile Gln Asn
 305 310 315 320

Ser Ile Cys Ser Pro Asp Phe Ser Gly Gly Val Asn Met Asp His Ser
 325 330 335

Thr Ser Ile Leu Gly Val Ala Ser Ser Ile Ala His Glu Leu Gly His
 340 345 350

Ser Leu Gly Leu Asp His Asp Leu Pro Gly Asn Ser Cys Pro Cys Pro
 355 360 365

Gly Pro Ala Pro Ala Lys Thr Cys Ile Met Glu Ala Ser Thr Asp Phe
 370 375 380

Leu Pro Gly Leu Asn Phe Ser Asn Cys Ser Arg Arg Ala Leu Glu Lys
 385 390 395 400

Ala Leu Leu Asp Gly Met Gly Ser Cys Leu Phe Glu Arg Leu Pro Ser
 405 410 415

Leu Pro Pro Met Ala Ala Phe Cys Gly Asn Met Phe Val Glu Pro Gly
 420 425 430

Glu Gln Cys Asp Cys Gly Phe Leu Asp Asp Cys Val Asp Pro Cys Cys
 435 440 445

Asp Ser Leu Thr Cys Gln Leu Arg Pro Gly Ala Gln Cys Ala Ser Asp
 450 455 460

Gly Pro Cys Cys Gln Asn Cys Gln Leu Arg Pro Ser Gly Trp Gln Cys
 465 470 475 480

Arg Pro Thr Arg Gly Asp Cys Asp Leu Pro Glu Phe Cys Pro Gly Asp
 485 490 495

Ser Ser Gln Cys Pro Pro Asp Val Ser Leu Gly Asp Gly Glu Pro Cys
 500 505 510

Ala Gly Gly Gln Ala Val Cys Met His Gly Arg Cys Ala Ser Tyr Ala
 515 520 525

Gln Gln Cys Gln Ser Leu Trp Gly Pro Gly Ala Gln Pro Ala Ala Pro
 530 535 540

Leu Cys Leu Gln Thr Ala Asn Thr Arg Gly Asn Ala Phe Gly Ser Cys
 545 550 555 560

Gly Arg Asn Pro Ser Gly Ser Tyr Val Ser Cys Thr Pro Arg Asp Ala
 565 570 575

Ile Cys Gly Gln Leu Gln Cys Gln Thr Gly Arg Thr Gln Pro Leu Leu
 580 585 590

Gly Ser Ile Arg Asp Leu Leu Trp Glu Thr Ile Asp Val Asn Gly Thr
 595 600 605

Glu Leu Asn Cys Ser Trp Val His Leu Asp Leu Gly Ser Asp Val Ala
 610 615 620

Gln Pro Leu Leu Thr Leu Pro Gly Thr Ala Cys Gly Pro Gly Leu Val
 625 630 635 640

Cys Ile Asp His Arg Cys Gln Arg Val Asp Leu Leu Gly Ala Gln Glu
 645 650 655

Cys Arg Ser Lys Cys His Gly His Gly Val Cys Asp Ser Asn Arg His
 660 665 670

Cys Tyr Cys Glu Glu Gly Trp Ala Pro Pro Asp Cys Thr Thr Gln Leu
 675 680 685

Lys Ala Thr Ser Ser Leu Thr Thr Gly Leu Leu Leu Ser Leu Leu Val
 690 695 700

Leu Leu Val Leu Val Met Leu Gly Ala Gly Tyr Trp Tyr Arg Ala Arg
 705 710 715 720

Leu His Gln Arg Leu Cys Gln Leu Lys Gly Pro Thr Cys Gln Tyr Arg
 725 730 735

Ala Ala Gln Ser Gly Pro Ser Glu Arg Pro Gly Pro Pro Gln Arg Ala
 740 745 750

Leu Leu Ala Arg Gly Thr Lys Ser Gln Gly Pro Ala Lys Pro Pro Pro
 755 760 765

Pro Arg Lys Pro Leu Pro Ala Asp Pro Gln Gly Arg Cys Pro Ser Gly
 770 775 780

Asp Leu Pro Gly Pro Gly Ala Gly Ile Pro Pro Leu Val Val Pro Ser
 785 790 795 800

Arg Pro Ala Pro Pro Pro Pro Thr Val Ser Ser Leu Tyr Leu
 805 810

<210> 91
 <211> 55
 <212> PRT
 <213> Homo sapiens

<400> 91
 Met Asn Leu Ser Phe Arg Glu Phe Asn Gln Glu Lys Arg Val Gly Gly
 1 5 10 15

Ile Ser Trp Gly Pro Lys Gly Arg Leu Ser Gly Ile Phe Ser Thr Ile
 20 25 30

Gln Asn Gln Gln Gln Ser Gln Lys Arg Gly Met Ser Ser Asn Ser Leu
 35 40 45

Lys Arg Thr Pro Gln Asn Ser
 50 55

<210> 92
 <211> 54
 <212> PRT
 <213> Homo sapiens

<400> 92
 Met Gly Asn Gln Arg Trp His Ala Lys Phe Asn Ser Gly Leu Arg Tyr
 1 5 10 15

Pro His Cys Pro His Gln Ala Ser Pro Ala Leu Thr Val Glu Pro His
 20 25 30

Gly Glu Glu His Val Leu Glu Arg Asp Pro Phe Val Asn Cys Phe Val
35 40 45

Val Phe Ser Ser Met Asn
50

```
<210> 93
<211> 51
<212> PRT
<213> Homo sapiens
```

<400> 93
Met Leu Cys Ala Gln Gly Ala Ala Gly Cys Gln Gln His Leu Ser Leu
1 5 10 15

Asn Thr Ile Ser Leu Cys Ala Glu Lys Thr Gly Asn Gln Arg Ile Asn
20 25 30

Ile Thr Ser Pro Gly Trp Arg Thr Ile Ser Cys Asp Phe Ala Ala Glu
35 40 45

Phe Thr His
50

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<210> 94
<211> 43
<212> PRT
<213> Homo sapiens
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```
<400> 94
Met Pro Pro Leu Ile Pro His Ala Ala Lys Arg Ile Gly Thr Leu Ser
1           5           10           15
```

Gly Pro Gly Thr Val Val Met Ala Ile Ser Tyr Phe Thr His Thr Arg
20 25 30

Pro Phe Lys Val Ser Leu Pro Gln Ala Ile Lys
35 40

```
<210> 95
<211> 39
<212> PRT
<213> Homo sapiens
```

```
<400> 95
Met Val Glu Asn Ile Pro Glu Ser Leu Pro Phe Gly Pro Gln Leu Met
1           5           10           15
```

Pro Pro Thr Leu Phe Ser Trp Leu Asn Ser Leu Lys Glu Arg Phe Met
 20 25 30

Cys Tyr Cys Pro Val Ser Gln
 35

<210> 96
 <211> 36
 <212> PRT
 <213> Homo sapiens

<400> 96
 Met Ser Gln Cys Thr Ser Tyr Pro Leu Ile Gln Lys Glu Glu His Phe
 1 5 10 15

Ala Gln Arg Lys Ile Lys Arg Ser Met Asn Val Ile Phe Tyr Leu Leu
 20 25 30

Phe Ser Val Gly
 35

<210> 97
 <211> 33
 <212> PRT
 <213> Homo sapiens

<400> 97
 Met Gly Ser Ser Leu Pro Ile Gly Phe Leu Leu His Thr Ala Gly Leu
 1 5 10 15

Ser Leu Tyr Phe Lys Lys Lys Lys Lys Lys Lys Lys Asp Lys Asn Cys
 20 25 30

His

<210> 98
 <211> 317
 <212> PRT
 <213> Homo sapiens

<400> 98
 Met Ser Glu Gly Val Gly Thr Phe Arg Met Val Pro Glu Glu Glu Gln
 1 5 10 15

Glu Leu Arg Ala Gln Leu Glu Gln Leu Thr Thr Lys Asp His Gly Pro
 20 25 30

Val Phe Gly Pro Cys Ser Gln Leu Pro Arg His Thr Leu Gln Lys Ala
 35 40 45

Lys Asp Glu Leu Asn Glu Arg Glu Glu Thr Arg Glu Glu Ala Val Arg
 50 55 60

Glu Leu Gln Glu Met Val Gln Ala Gln Ala Ala Ser Gly Glu Glu Leu
 65 70 75 80

Ala Val Ala Val Ala Glu Arg Val Gln Glu Lys Asp Ser Gly Phe Phe
 85 90 95

Leu Arg Phe Ile Arg Ala Arg Lys Phe Asn Val Gly Arg Ala Tyr Glu
 100 105 110

Leu Leu Arg Gly Tyr Val Asn Phe Arg Leu Gln Tyr Pro Glu Leu Phe
 115 120 125

Asp Ser Leu Ser Pro Glu Ala Val Arg Cys Thr Ile Glu Ala Gly Tyr
 130 135 140

Pro Gly Val Leu Ser Ser Arg Asp Lys Tyr Gly Arg Val Val Met Leu
 145 150 155 160

Phe Asn Ile Glu Asn Trp Gln Ser Gln Glu Ile Thr Phe Asp Glu Ile
 165 170 175

Leu Gln Ala Tyr Cys Phe Ile Leu Glu Lys Leu Leu Glu Asn Glu Glu
 180 185 190

Thr Gln Ile Asn Gly Phe Cys Ile Ile Glu Asn Phe Lys Gly Phe Thr
 195 200 205

Met Gln Gln Ala Ala Ser Leu Arg Thr Ser Asp Leu Arg Lys Met Val
 210 215 220

Asp Met Leu Gln Asp Ser Phe Pro Ala Arg Phe Lys Ala Ile His Phe
 225 230 235 240

Ile His Gln Pro Trp Tyr Phe Thr Thr Thr Tyr Asn Val Val Lys Pro
 245 250 255

Phe Leu Lys Ser Lys Leu Leu Glu Arg Val Phe Val His Gly Asp Asp
 260 265 270

Leu Ser Gly Phe Tyr Gln Glu Ile Asp Glu Asn Ile Leu Pro Ser Asp
 275 280 285

Phe Gly Gly Thr Leu Pro Lys Tyr Asp Gly Lys Ala Val Ala Glu Gln
 290 295 300

Leu Phe Gly Pro Gln Ala Gln Ala Glu Asn Thr Ala Phe
 305 310 315

<210> 99

<211> 375

<212> PRT

<213> Homo sapiens

<400> 99

Met Glu Glu Glu Ile Ala Ala Leu Val Ile Asp Asn Gly Ser Gly Met
 1 5 10 15

Cys Lys Ala Gly Phe Ala Gly Asp Asp Ala Pro Arg Ala Val Phe Pro
 20 25 30

Ser Ile Val Gly Arg Pro Arg His Gln Gly Val Met Val Gly Met Gly
 35 40 45

Gln Lys Asp Ser Tyr Val Gly Asp Glu Ala Gln Ser Lys Arg Gly Ile
 50 55 60

Leu Thr Leu Lys Tyr Pro Ile Glu His Gly Ile Val Thr Asn Trp Asp
 65 70 75 80

Asp Met Glu Lys Ile Trp His His Thr Phe Tyr Asn Glu Leu Arg Val
 85 90 95

Ala Pro Glu Glu His Pro Val Leu Leu Thr Glu Ala Pro Leu Asn Pro
 100 105 110

Lys Ala Asn Arg Glu Lys Met Thr Gln Ile Met Phe Glu Thr Phe Asn
 115 120 125

Thr Pro Ala Met Tyr Val Ala Ile Gln Ala Val Leu Ser Leu Tyr Ala
 130 135 140

Ser Gly Arg Thr Thr Gly Ile Val Met Asp Ser Gly Asp Gly Val Thr
 145 150 155 160
 His Thr Val Pro Ile Tyr Glu Gly Tyr Ala Leu Pro His Ala Ile Leu
 165 170 175
 Arg Leu Asp Leu Ala Gly Arg Asp Leu Thr Asp Tyr Leu Met Lys Ile
 180 185 190
 Leu Thr Glu Arg Gly Tyr Ser Phe Thr Thr Thr Ala Glu Arg Glu Ile
 195 200 205
 Val Arg Asp Ile Lys Glu Lys Leu Cys Tyr Val Ala Leu Asp Phe Glu
 210 215 220
 Gln Glu Met Ala Thr Ala Ala Ser Ser Ser Ser Leu Glu Lys Ser Tyr
 225 230 235 240
 Glu Leu Pro Asp Gly Gln Val Ile Thr Ile Gly Asn Glu Arg Phe Arg
 245 250 255
 Cys Pro Glu Ala Leu Phe Gln Pro Ser Phe Leu Gly Met Glu Ser Cys
 260 265 270
 Gly Ile His Glu Thr Thr Phe Asn Ser Ile Met Lys Cys Asp Val Asp
 275 280 285
 Ile Arg Lys Asp Leu Tyr Ala Asn Thr Val Leu Ser Gly Gly Thr Thr
 290 295 300
 Met Tyr Pro Gly Ile Ala Asp Arg Met Gln Lys Glu Ile Thr Ala Leu
 305 310 315 320
 Ala Pro Ser Thr Met Lys Ile Lys Ile Ile Ala Pro Pro Glu Arg Lys
 325 330 335
 Tyr Ser Val Trp Ile Gly Gly Ser Ile Leu Ala Ser Leu Ser Thr Phe
 340 345 350
 Gln Gln Met Trp Ile Ser Lys Gln Glu Tyr Asp Glu Ser Gly Pro Ser
 355 360 365

Ile Val His Arg Lys Cys Phe
370 375

<210> 100
<211> 582
<212> PRT
<213> Homo sapiens

<400> 100
Met Ser Pro Ala Pro Arg Pro Ser Arg Cys Leu Leu Leu Pro Leu Leu
1 5 10 15

Thr Leu Gly Thr Ala Leu Ala Ser Leu Gly Ser Ala Gln Ser Ser Ser
20 25 30

Phe Ser Pro Glu Ala Trp Leu Gln Gln Tyr Gly Tyr Leu Pro Pro Gly
35 40 45

Asp Leu Arg Thr His Thr Gln Arg Ser Pro Gln Ser Leu Ser Ala Ala
50 55 60

Ile Ala Ala Met Gln Lys Phe Tyr Gly Leu Gln Val Thr Gly Lys Ala
65 70 75 80

Asp Ala Asp Thr Met Lys Ala Met Arg Arg Pro Arg Cys Gly Val Pro
85 90 95

Asp Lys Phe Gly Ala Glu Ile Lys Ala Asn Val Arg Arg Lys Arg Tyr
100 105 110

Ala Ile Gln Gly Leu Lys Trp Gln His Asn Glu Ile Thr Phe Cys Ile
115 120 125

Gln Asn Tyr Thr Pro Lys Val Gly Glu Tyr Ala Thr Tyr Glu Ala Ile
130 135 140

Arg Lys Ala Phe Arg Val Trp Glu Ser Ala Thr Pro Leu Arg Phe Arg
145 150 155 160

Glu Val Pro Tyr Ala Tyr Ile Arg Glu Gly His Glu Lys Gln Ala Asp
165 170 175

Ile Met Ile Phe Phe Ala Glu Gly Phe His Gly Asp Ser Thr Pro Phe
180 185 190

Asp Gly Glu Gly Gly Phe Leu Ala His Ala Tyr Phe Pro Gly Pro Asn
 195 200 205

Ile Gly Gly Asp Thr His Phe Asp Ser Ala Glu Pro Trp Thr Val Arg
 210 215 220

Asn Glu Asp Leu Asn Gly Asn Asp Ile Phe Leu Val Ala Val His Glu
 225 230 235 240

Leu Gly His Ala Leu Gly Leu Glu His Ser Ser Asp Pro Ser Ala Ile
 245 250 255

Met Ala Pro Phe Tyr Gln Trp Met Asp Thr Glu Asn Phe Val Leu Pro
 260 265 270

Asp Asp Asp Arg Arg Gly Ile Gln Gln Leu Tyr Gly Gly Glu Ser Gly
 275 280 285

Phe Pro Thr Lys Met Pro Pro Gln Pro Arg Thr Thr Ser Arg Pro Ser
 290 295 300

Val Pro Asp Lys Pro Lys Asn Pro Thr Tyr Gly Pro Asn Ile Cys Asp
 305 310 315 320

Gly Asn Phe Asp Thr Val Ala Met Leu Arg Gly Glu Met Phe Val Phe
 325 330 335

Lys Glu Arg Trp Phe Trp Arg Val Arg Asn Asn Gln Val Met Asp Gly
 340 345 350

Tyr Pro Met Pro Ile Gly Gln Phe Trp Arg Gly Leu Pro Ala Ser Ile
 355 360 365

Asn Thr Ala Tyr Glu Arg Lys Asp Gly Lys Phe Val Phe Phe Lys Gly
 370 375 380

Asp Lys His Trp Val Phe Asp Glu Ala Ser Leu Glu Pro Gly Tyr Pro
 385 390 395 400

Lys His Ile Lys Glu Leu Gly Arg Gly Leu Pro Thr Asp Lys Ile Asp
 405 410 415

Ala Ala Leu Phe Trp Met Pro Asn Gly Lys Thr Tyr Phe Phe Arg Gly
 420 425 430

Asn Lys Tyr Tyr Arg Phe Asn Glu Glu Leu Arg Ala Val Asp Ser Glu
 435 440 445

Tyr Pro Lys Asn Ile Lys Val Trp Glu Gly Ile Pro Glu Ser Pro Arg
 450 455 460

Gly Ser Phe Met Gly Ser Asp Glu Val Phe Thr Tyr Phe Tyr Lys Gly
 465 470 475 480

Asn Lys Tyr Trp Lys Phe Asn Asn Gln Lys Leu Lys Val Glu Pro Gly
 485 490 495

Tyr Pro Lys Ser Ala Leu Arg Asp Trp Met Gly Cys Pro Ser Gly Gly
 500 505 510

Arg Pro Asp Glu Gly Thr Glu Glu Glu Thr Glu Val Ile Ile Ile Glu
 515 520 525

Val Asp Glu Glu Gly Gly Gly Ala Val Ser Ala Ala Ala Val Val Leu
 530 535 540

Pro Val Leu Leu Leu Leu Leu Val Leu Ala Val Gly Leu Ala Val Phe
 545 550 555 560

Phe Phe Arg Arg His Gly Thr Pro Arg Arg Leu Leu Tyr Cys Gln Arg
 565 570 575

Ser Leu Leu Asp Lys Val
 580

<210> 101

<211> 2285

<212> PRT

<213> Homo sapiens

<400> 101

Met Ala Ala Gln Val Ala Pro Ala Ala Ala Ser Ser Leu Gly Asn Pro
 1 5 10 15

Pro Pro Pro Pro Pro Ser Glu Leu Lys Lys Ala Glu Gln Gln Gln Arg
 20 25 30

Glu Glu Ala Gly Gly Glu Ala Ala Ala Ala Ala Ala Glu Arg Gly
 35 40 45

Glu Met Lys Ala Ala Ala Gly Gln Glu Ser Glu Gly Pro Ala Val Gly
 50 55 60

Pro Pro Gln Pro Leu Gly Lys Glu Leu Gln Asp Gly Ala Glu Ser Asn
 65 70 75 80

Gly Gly Gly Gly Gly Gly Gly Ala Gly Ser Gly Gly Gly Pro Gly Ala
 85 90 95

Glu Pro Asp Leu Lys Asn Ser Asn Gly Asn Ala Gly Pro Arg Pro Ala
 100 105 110

Leu Asn Asn Asn Leu Thr Glu Pro Pro Gly Gly Gly Gly Gly Ser
 115 120 125

Ser Asp Gly Val Gly Ala Pro Pro His Ser Ala Ala Ala Ala Leu Pro
 130 135 140

Pro Pro Ala Tyr Gly Phe Gly Gln Pro Tyr Gly Arg Ser Pro Ser Ala
 145 150 155 160

Val Ala Ala Ala Ala Ala Ala Val Phe His Gln Gln His Gly Gly Gln
 165 170 175

Gln Ser Pro Gly Leu Ala Ala Leu Gln Ser Gly Gly Gly Gly Gly Leu
 180 185 190

Glu Pro Tyr Ala Gly Pro Gln Gln Asn Ser His Asp His Gly Phe Pro
 195 200 205

Asn His Gln Tyr Asn Ser Tyr Tyr Pro Asn Arg Ser Ala Tyr Pro Pro
 210 215 220

Pro Ala Pro Ala Tyr Ala Leu Ser Ser Pro Arg Gly Gly Thr Pro Gly
 225 230 235 240

Ser Gly Ala Ala Ala Ala Ala Gly Ser Lys Pro Pro Pro Ser Ser Ser
 245 250 255

Ala Ser Ala Ser Ser Ser Ser Ser Ser Phe Ala Gln Gln Arg Phe Gly
 260 265 270

Ala Met Gly Gly Gly Gly Pro Ser Ala Ala Gly Gly Gly Thr Pro Gln
 275 280 285

Pro Thr Ala Thr Pro Thr Leu Asn Gln Leu Leu Thr Ser Pro Ser Ser
 290 295 300

Ala Arg Gly Tyr Gln Gly Tyr Pro Gly Gly Asp Tyr Ser Gly Gly Pro
 305 310 315 320

Gln Asp Gly Gly Ala Gly Lys Gly Pro Ala Asp Met Ala Ser Gln Cys
 325 330 335

Trp Gly Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ser Gly Gly
 340 345 350

Ala Gln Gln Arg Ser His His Ala Pro Met Ser Pro Gly Ser Ser Gly
 355 360 365

Gly Gly Gly Gln Pro Leu Ala Arg Thr Pro Gln Pro Ser Ser Pro Met
 370 375 380

Asp Gln Met Gly Lys Met Arg Pro Gln Pro Tyr Gly Gly Thr Asn Pro
 385 390 395 400

Tyr Ser Gln Gln Gln Gly Pro Pro Ser Gly Pro Gln Gln Gly His Gly
 405 410 415

Tyr Pro Gly Gln Pro Tyr Gly Ser Gln Thr Pro Gln Arg Tyr Pro Met
 420 425 430

Thr Met Gln Gly Arg Ala Gln Ser Ala Met Gly Gly Leu Ser Tyr Thr
 435 440 445

Gln Gln Ile Pro Pro Tyr Gly Gln Gln Gly Pro Ser Gly Tyr Gly Gln
 450 455 460

Gln Gly Gln Thr Pro Tyr Tyr Asn Gln Gln Ser Pro His Pro Gln Gln
 465 470 475 480

Gln Gln Pro Pro Tyr Ser Gln Gln Pro Pro Ser Gln Thr Pro His Ala
 485 490 495

Gln Pro Ser Tyr Gln Gln Gln Pro Gln Ser Gln Pro Pro Gln Leu Gln
 500 505 510

Ser Ser Gln Pro Pro Tyr Ser Gln Gln Pro Ser Gln Pro Pro His Gln
 515 520 525

Gln Ser Pro Ala Pro Tyr Pro Ser Gln Gln Ser Thr Thr Gln Gln His
 530 535 540

Pro Gln Ser Gln Pro Pro Tyr Ser Gln Pro Gln Ala Gln Ser Pro Tyr
 545 550 555 560

Gln Gln Gln Gln Pro Gln Gln Pro Ala Pro Ser Thr Leu Ser Gln Gln
 565 570 575

Ala Ala Tyr Pro Gln Pro Gln Ser Gln Gln Ser Gln Gln Thr Ala Tyr
 580 585 590

Ser Gln Gln Arg Phe Pro Pro Pro Gln Glu Leu Ser Gln Asp Ser Phe
 595 600 605

Gly Ser Gln Ala Ser Ser Ala Pro Ser Met Thr Ser Ser Lys Gly Gly
 610 615 620

Gln Glu Asp Met Asn Leu Ser Leu Gln Ser Arg Pro Ser Ser Leu Pro
 625 630 635 640

Asp Leu Ser Gly Ser Ile Asp Asp Leu Pro Met Gly Thr Glu Gly Ala
 645 650 655

Leu Ser Pro Gly Val Ser Thr Ser Gly Ile Ser Ser Ser Gln Gly Glu
 660 665 670

Gln Ser Asn Pro Ala Gln Ser Pro Phe Ser Pro His Thr Ser Pro His
 675 680 685

Leu Pro Gly Ile Arg Gly Pro Ser Pro Ser Pro Val Gly Ser Pro Ala
 690 695 700

Ser Val Ala Gln Ser Arg Ser Gly Pro Leu Ser Pro Ala Ala Val Pro
705 710 715 720

Gly Asn Gln Met Pro Pro Arg Pro Pro Ser Gly Gln Ser Asp Ser Ile
725 730 735

Met His Pro Ser Met Asn Gln Ser Ser Ile Ala Gln Asp Arg Gly Tyr
740 745 750

Met Gln Arg Asn Pro Gln Met Pro Gln Tyr Ser Ser Pro Gln Pro Gly
755 760 765

Ser Ala Leu Ser Pro Arg Gln Pro Ser Gly Gly Gln Ile His Thr Gly
770 775 780

Met Gly Ser Tyr Gln Gln Asn Ser Met Gly Ser Tyr Gly Pro Gln Gly
785 790 795 800

Gly Gln Tyr Gly Pro Gln Gly Gly Tyr Pro Arg Gln Pro Asn Tyr Asn
805 810 815

Ala Leu Pro Asn Ala Asn Tyr Pro Ser Ala Gly Met Ala Gly Gly Ile
820 825 830

Asn Pro Met Gly Ala Gly Gly Gln Met His Gly Gln Pro Gly Ile Pro
835 840 845

Pro Tyr Gly Thr Leu Pro Pro Gly Arg Met Ser His Ala Ser Met Gly
850 855 860

Asn Arg Pro Tyr Gly Pro Asn Met Ala Asn Met Pro Pro Gln Val Gly
865 870 875 880

Ser Gly Met Cys Pro Pro Pro Gly Gly Met Asn Arg Lys Thr Gln Glu
885 890 895

Thr Ala Val Ala Met His Val Ala Ala Asn Ser Ile Gln Asn Arg Pro
900 905 910

Pro Gly Tyr Pro Asn Met Asn Gln Gly Gly Met Met Gly Thr Gly Pro
915 920 925

Pro Tyr Gly Gln Gly Ile Asn Ser Met Ala Gly Met Ile Asn Pro Gln
 930 935 940

Gly Pro Pro Tyr Ser Met Gly Gly Thr Met Ala Asn Asn Ser Ala Gly
 945 950 955 960

Met Ala Ala Ser Pro Glu Met Met Gly Leu Gly Asp Val Lys Leu Thr
 965 970 975

Pro Ala Thr Lys Met Asn Asn Lys Ala Asp Gly Thr Pro Lys Thr Glu
 980 985 990

Ser Lys Ser Lys Lys Ser Ser Ser Ser Thr Thr Thr Asn Glu Lys Ile
 995 1000 1005

Thr Lys Leu Tyr Glu Leu Gly Gly Glu Pro Glu Arg Lys Met Trp
 1010 1015 1020

Val Asp Arg Tyr Leu Ala Phe Thr Glu Glu Lys Ala Met Gly Met
 1025 1030 1035

Thr Asn Leu Pro Ala Val Gly Arg Lys Pro Leu Asp Leu Tyr Arg
 1040 1045 1050

Leu Tyr Val Ser Val Lys Glu Ile Gly Gly Leu Thr Gln Val Asn
 1055 1060 1065

Lys Asn Lys Lys Trp Arg Glu Leu Ala Thr Asn Leu Asn Val Gly
 1070 1075 1080

Thr Ser Ser Ser Ala Ala Ser Ser Leu Lys Lys Gln Tyr Ile Gln
 1085 1090 1095

Cys Leu Tyr Ala Phe Glu Cys Lys Ile Glu Arg Gly Glu Asp Pro
 1100 1105 1110

Pro Pro Asp Ile Phe Ala Ala Ala Asp Ser Lys Lys Ser Gln Pro
 1115 1120 1125

Lys Ile Gln Pro Pro Ser Pro Ala Gly Ser Gly Ser Met Gln Gly
 1130 1135 1140

Pro	Gln	Thr	Pro	Gln	Ser	Thr	Ser	Ser	Ser	Met	Ala	Glu	Gly	Gly
1145						1150					1155			
Asp	Leu	Lys	Pro	Pro	Thr	Pro	Ala	Ser	Thr	Pro	His	Ser	Gln	Ile
1160						1165					1170			
Pro	Pro	Leu	Pro	Gly	Met	Ser	Arg	Ser	Asn	Ser	Val	Gly	Ile	Gln
1175						1180					1185			
Asp	Ala	Phe	Asn	Asp	Gly	Ser	Asp	Ser	Thr	Phe	Gln	Lys	Arg	Asn
1190						1195					1200			
Ser	Met	Thr	Pro	Asn	Pro	Gly	Tyr	Gln	Pro	Ser	Met	Asn	Thr	Ser
1205						1210					1215			
Asp	Met	Met	Gly	Arg	Met	Ser	Tyr	Glu	Pro	Asn	Lys	Asp	Pro	Tyr
1220						1225					1230			
Gly	Ser	Met	Arg	Lys	Ala	Pro	Gly	Ser	Asp	Pro	Phe	Met	Ser	Ser
1235						1240					1245			
Gly	Gln	Gly	Pro	Asn	Gly	Gly	Met	Gly	Asp	Pro	Tyr	Ser	Arg	Ala
1250						1255					1260			
Ala	Gly	Pro	Gly	Leu	Gly	Asn	Val	Ala	Met	Gly	Pro	Arg	Gln	His
1265						1270					1275			
Tyr	Pro	Tyr	Gly	Gly	Pro	Tyr	Asp	Arg	Val	Arg	Thr	Glu	Pro	Gly
1280						1285					1290			
Ile	Gly	Pro	Glu	Gly	Asn	Met	Ser	Thr	Gly	Ala	Pro	Gln	Pro	Asn
1295						1300					1305			
Leu	Met	Pro	Ser	Asn	Pro	Asp	Ser	Gly	Met	Tyr	Ser	Pro	Ser	Arg
1310						1315					1320			
Tyr	Pro	Pro	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Arg	His	Asp	Ser
1325						1330					1335			
Tyr	Gly	Asn	Gln	Phe	Ser	Thr	Gln	Gly	Thr	Pro	Ser	Gly	Ser	Pro
1340						1345					1350			

Phe	Pro	Ser	Gln	Gln	Thr	Thr	Met	Tyr	Gln	Gln	Gln	Gln	Gln	Asn
1355						1360					1365			
Tyr	Lys	Arg	Pro	Met	Asp	Gly	Thr	Tyr	Gly	Pro	Pro	Ala	Lys	Arg
1370						1375					1380			
His	Glu	Gly	Glu	Met	Tyr	Ser	Val	Pro	Tyr	Ser	Thr	Gly	Gln	Gly
1385						1390					1395			
Gln	Pro	Gln	Gln	Gln	Gln	Leu	Pro	Pro	Ala	Gln	Pro	Gln	Pro	Ala
1400						1405					1410			
Ser	Gln	Gln	Gln	Ala	Ala	Gln	Pro	Ser	Pro	Gln	Gln	Asp	Val	Tyr
1415						1420					1425			
Asn	Gln	Tyr	Gly	Asn	Ala	Tyr	Pro	Ala	Thr	Ala	Thr	Ala	Ala	Thr
1430						1435					1440			
Glu	Arg	Arg	Pro	Ala	Gly	Gly	Pro	Gln	Asn	Gln	Phe	Pro	Phe	Gln
1445						1450					1455			
Phe	Gly	Arg	Asp	Arg	Val	Ser	Ala	Pro	Pro	Gly	Thr	Asn	Ala	Gln
1460						1465					1470			
Gln	Asn	Met	Pro	Pro	Gln	Met	Met	Gly	Gly	Pro	Ile	Gln	Ala	Ser
1475						1480					1485			
Ala	Glu	Val	Ala	Gln	Gln	Gly	Thr	Met	Trp	Gln	Gly	Arg	Asn	Asp
1490						1495					1500			
Met	Thr	Tyr	Asn	Tyr	Ala	Asn	Arg	Gln	Ser	Thr	Gly	Ser	Ala	Pro
1505						1510					1515			
Gln	Gly	Pro	Ala	Tyr	His	Gly	Val	Asn	Arg	Thr	Asp	Glu	Met	Leu
1520						1525					1530			
His	Thr	Asp	Gln	Arg	Ala	Asn	His	Glu	Gly	Ser	Trp	Pro	Ser	His
1535						1540					1545			
Gly	Thr	Arg	Gln	Pro	Pro	Tyr	Gly	Pro	Ser	Ala	Pro	Val	Pro	Pro
1550						1555					1560			

Met	Thr	Arg	Pro	Pro	Pro	Ser	Asn	Tyr	Gln	Pro	Pro	Pro	Ser	Met
1565						1570					1575			
Gln	Asn	His	Ile	Pro	Gln	Val	Ser	Ser	Pro	Ala	Pro	Leu	Pro	Arg
1580						1585					1590			
Pro	Met	Glu	Asn	Arg	Thr	Ser	Pro	Ser	Lys	Ser	Pro	Phe	Leu	His
1595						1600					1605			
Ser	Gly	Met	Lys	Met	Gln	Lys	Ala	Gly	Pro	Pro	Val	Pro	Ala	Ser
1610						1615					1620			
His	Ile	Ala	Pro	Ala	Pro	Val	Gln	Pro	Pro	Met	Ile	Arg	Arg	Asp
1625						1630					1635			
Ile	Thr	Phe	Pro	Pro	Gly	Ser	Val	Glu	Ala	Thr	Gln	Pro	Val	Leu
1640						1645					1650			
Lys	Gln	Arg	Arg	Arg	Leu	Thr	Met	Lys	Asp	Ile	Gly	Thr	Pro	Glu
1655						1660					1665			
Ala	Trp	Arg	Val	Met	Met	Ser	Leu	Lys	Ser	Gly	Leu	Leu	Ala	Glu
1670						1675					1680			
Ser	Thr	Trp	Ala	Leu	Asp	Thr	Ile	Asn	Ile	Leu	Leu	Tyr	Asp	Asp
1685						1690					1695			
Asn	Ser	Ile	Met	Thr	Phe	Asn	Leu	Ser	Gln	Leu	Pro	Gly	Leu	Leu
1700						1705					1710			
Glu	Leu	Leu	Val	Glu	Tyr	Phe	Arg	Arg	Cys	Leu	Ile	Glu	Ile	Phe
1715						1720					1725			
Gly	Ile	Leu	Lys	Glu	Tyr	Glu	Val	Gly	Asp	Pro	Gly	Gln	Arg	Thr
1730						1735					1740			
Leu	Leu	Asp	Pro	Gly	Arg	Phe	Ser	Lys	Val	Ser	Ser	Pro	Ala	Pro
1745						1750					1755			
Met	Glu	Gly	Gly	Glu	Glu	Glu	Glu	Glu	Leu	Leu	Gly	Pro	Lys	Leu
1760						1765					1770			

Glu Glu Glu Glu Glu Glu Val Val Glu Asn Asp Glu Glu Ile
 1775 1780 1785

Ala Phe Ser Gly Lys Asp Lys Pro Ala Ser Glu Asn Ser Glu Glu
 1790 1795 1800

Lys Leu Ile Ser Lys Phe Asp Lys Leu Pro Val Lys Ile Val Gln
 1805 1810 1815

Lys Asn Asp Pro Phe Val Val Asp Cys Ser Asp Lys Leu Gly Arg
 1820 1825 1830

Val Gln Glu Phe Asp Ser Gly Leu Leu His Trp Arg Ile Gly Gly
 1835 1840 1845

Gly Asp Thr Thr Glu His Ile Gln Thr His Phe Glu Ser Lys Thr
 1850 1855 1860

Glu Leu Leu Pro Ser Arg Pro His Ala Pro Cys Pro Pro Ala Pro
 1865 1870 1875

Arg Lys His Val Thr Thr Ala Glu Gly Thr Pro Gly Thr Thr Asp
 1880 1885 1890

Gln Glu Gly Pro Pro Pro Asp Gly Pro Pro Glu Lys Arg Ile Thr
 1895 1900 1905

Ala Thr Met Asp Asp Met Leu Ser Thr Arg Ser Ser Thr Leu Thr
 1910 1915 1920

Glu Asp Gly Ala Lys Ser Ser Glu Ala Ile Lys Glu Ser Ser Lys
 1925 1930 1935

Phe Pro Phe Gly Ile Ser Pro Ala Gln Ser His Arg Asn Ile Lys
 1940 1945 1950

Ile Leu Glu Asp Glu Pro His Ser Lys Asp Glu Thr Pro Leu Cys
 1955 1960 1965

Thr Leu Leu Asp Trp Gln Asp Ser Leu Ala Lys Arg Cys Val Cys
 1970 1975 1980

Val Ser	Asn Thr Ile Arg Ser	Leu Ser Phe Val Pro	Gly Asn Asp
1985	1990	1995	
Phe Glu	Met Ser Lys His Pro	Gly Leu Leu Leu Ile	Leu Gly Lys
2000	2005	2010	
Leu Ile	Leu Leu His His Lys	His Pro Glu Arg Lys	Gln Ala Pro
2015	2020	2025	
Leu Thr	Tyr Glu Lys Glu Glu	Glu Gln Asp Gln Gly	Val Ser Cys
2030	2035	2040	
Asn Lys	Val Glu Trp Trp Trp	Asp Cys Leu Glu Met	Leu Arg Glu
2045	2050	2055	
Asn Thr	Leu Val Thr Leu Ala	Asn Ile Ser Gly Gln	Leu Asp Leu
2060	2065	2070	
Ser Pro	Tyr Pro Glu Ser Ile	Cys Leu Pro Val Leu	Asp Gly Leu
2075	2080	2085	
Leu His	Trp Ala Val Cys Pro	Ser Ala Glu Ala Gln	Asp Pro Phe
2090	2095	2100	
Ser Thr	Leu Gly Pro Asn Ala	Val Leu Ser Pro Gln	Arg Leu Val
2105	2110	2115	
Leu Glu	Thr Leu Ser Lys Leu	Ser Ile Gln Asp Asn	Asn Val Asp
2120	2125	2130	
Leu Ile	Leu Ala Thr Pro Pro	Phe Ser Arg Leu Glu	Lys Leu Tyr
2135	2140	2145	
Ser Thr	Met Val Arg Phe Leu	Ser Asp Arg Lys Asn	Pro Val Cys
2150	2155	2160	
Arg Glu	Met Ala Val Val Leu	Leu Ala Asn Leu Ala	Gln Gly Asp
2165	2170	2175	
Ser Leu	Ala Ala Arg Ala Ile	Ala Val Gln Lys Gly	Ser Ile Gly
2180	2185	2190	

Asn Leu Leu Gly Phe Leu Glu Asp Ser Leu Ala Ala Thr Gln Phe
 2195 2200 2205

Gln Gln Ser Gln Ala Ser Leu Leu His Met Gln Asn Pro Pro Phe
 2210 2215 2220

Glu Pro Thr Ser Val Asp Met Met Arg Arg Ala Ala Arg Ala Leu
 2225 2230 2235

Leu Ala Leu Ala Lys Val Asp Glu Asn His Ser Glu Phe Thr Leu
 2240 2245 2250

Tyr Glu Ser Arg Leu Leu Asp Ile Ser Val Ser Pro Leu Met Asn
 2255 2260 2265

Ser Leu Val Ser Gln Val Ile Cys Asp Val Leu Phe Leu Ile Gly
 2270 2275 2280

Gln Ser
 2285

<210> 102

<211> 88

<212> PRT

<213> Homo sapiens

<400> 102

Met Ala Thr Gln Ala Arg Gln Glu Thr Cys Asp Asn Thr Lys Trp Asn
 1 5 10 15

Ser His Tyr Ala Arg Ser Cys Asp His His Gln Tyr His Pro Gln Arg
 20 25 30

Ser Tyr Lys Ala Lys Ala His Lys Gly Ala Pro Gly Gly Arg Trp Cys
 35 40 45

Val Gln Gly Val Gly Trp His Val Cys Val Gly Ala His Cys His Gly
 50 55 60

Ala Ser Ile Ser Lys Asn Ser Ser Arg Glu Val Cys Ala Glu Ile Leu
 65 70 75 80

Ala Cys Ile Pro Lys Ala His Ala
 85

<210> 103
 <211> 69
 <212> PRT
 <213> Homo sapiens

<400> 103
 Met Pro Tyr Asp Ser Val Arg Ile Glu Arg Arg Met Arg Cys Phe Lys
 1 5 10 15

Ser Lys Ser Gln Leu Leu Asp Ser Gln Val Phe Lys Tyr Gly His Thr
 20 25 30

Pro Tyr Leu Val Leu Asp Tyr Met Gly Tyr Glu Gln Gly Ile Glu Thr
 35 40 45

Asp Lys Ile Val Phe Thr Asp Thr Val Tyr Arg Phe Phe Phe Pro Phe
 50 55 60

Met Gln Leu Phe Ser
 65

<210> 104
 <211> 65
 <212> PRT
 <213> Homo sapiens

<400> 104
 Met Cys Phe Asn Phe Lys Met Leu Asn Ser Phe Gln Thr Trp Tyr Leu
 1 5 10 15

Ile Tyr Ser Pro Phe Leu Ala Phe Val Glu Phe Gln Ala Glu Cys Leu
 20 25 30

Thr Asp Cys Pro Arg Thr Arg Leu Ser Phe Asn Leu Lys Gln Leu Arg
 35 40 45

Lys Gly Gln Arg Arg Tyr Lys Gly Lys Ala Ala Gln Asn Arg Ser Gly
 50 55 60

Glu
 65

<210> 105
 <211> 61
 <212> PRT
 <213> Homo sapiens

<400> 105

Met Leu Gly Ala Val Ile Thr Thr Asn Ile Thr Pro Arg Gly Val Ile
 1 5 10 15

Lys Pro Arg Arg Thr Arg Gly Pro Leu Val Ala Gly Gly Val Cys Arg
 20 25 30

Gly Leu Gly Gly Thr Ser Val Leu Val Pro Thr Val Thr Val Gln Ala
 35 40 45

Ser Ala Arg Thr Gln Ala Gly Lys Ser Val Leu Lys Tyr
 50 55 60

<210> 106

<211> 58

<212> PRT

<213> Homo sapiens

<400> 106

Met Cys Asn Phe Phe Lys Tyr Val Phe Tyr Ser Tyr Gly Leu Leu Val
 1 5 10 15

Ser Glu Pro Asp Leu Leu Thr Ile Phe Leu Tyr Asn Asn Ala Ser His
 20 25 30

Phe Leu Asp Ser Leu Val Met Cys Cys Met Gln Glu Leu Ser Ser Ser
 35 40 45

Ser Glu Gly Gly Leu Pro Leu Gln Ala Ser
 50 55

<210> 107

<211> 55

<212> PRT

<213> Homo sapiens

<400> 107

Met Leu Lys Lys Lys Asn Phe Phe Leu Val Glu Met Gln Ser Pro Val
 1 5 10 15

Lys Arg Tyr Glu Lys Ala Ser Leu Ser Gln Arg Pro Gly Arg Gln Ser
 20 25 30

Thr Thr Arg Gly Ser Glu Val Leu Met Glu Ser Cys Leu Ser Asn Glu
 35 40 45

Val Leu Lys Arg Met Pro Lys
50 55

<210> 108
<211> 50
<212> PRT
<213> Homo sapiens

<400> 108
Met Leu Gln Ile Arg Lys Leu Leu Leu Gly Thr Cys Asp Thr His Ser
1 5 10 15

Glu Cys Asp Met Val Ala Asn Gly Trp Pro Val Leu Lys Ala Gly Ser
20 25 30

Gln His Lys Gly Gln Arg Ala Leu Ala Ala Pro Leu Pro Thr Ser Glu
35 40 45

Pro Gly
50

<210> 109
<211> 49
<212> PRT
<213> Homo sapiens

<400> 109
Met Arg His His Leu Phe Tyr Lys Leu Asp Tyr Gly Phe Lys Trp Asn
1 5 10 15

Thr Gln Gly Asn Ile Tyr Lys His Gln Gly Lys Leu Ser Thr Ala Ser
20 25 30

Leu Phe His Leu Glu Arg Gly Arg Phe Pro Asn Gln Thr Gly Phe Asp
35 40 45

Pro

<210> 110
<211> 48
<212> PRT
<213> Homo sapiens

<400> 110
Met Pro Val His Ser Ser Leu Gly Asn Lys Ser Glu Thr Pro Cys Gln
1 5 10 15

Lys Lys Lys Lys Lys Met Leu Leu Ile Leu Ser Glu Ser Lys Lys Glu
 20 25 30

Thr Leu Thr Ala Leu Asn Ser Gly Phe Ile Phe Leu Ala Val Phe Gly
 35 40 45

<210> 111

<211> 48

<212> PRT

<213> Homo sapiens

<400> 111

Met Arg Ser Trp Asp Leu Leu Phe Ser Pro Gly Leu Gln Asn Leu Ile
 1 5 10 15

Pro Val Thr Lys Ala Arg Lys Glu Leu Tyr His Lys Pro Ser Leu Ser
 20 25 30

Trp His Glu Asn Trp Leu Pro Gly Ser Val Tyr Pro Ile Asn Cys Glu
 35 40 45

<210> 112

<211> 45

<212> PRT

<213> Homo sapiens

<400> 112

Met Ile Gly His Glu Ala Ser Cys His Thr Pro Glu Ile Arg Val Arg
 1 5 10 15

Leu Leu Leu Arg Thr Met Cys Leu Val Thr Tyr Phe Ser Lys Ile Ile
 20 25 30

Ser Leu Pro Gly Asn Gln Ser Ser Leu Val Tyr Leu Ser
 35 40 45

<210> 113

<211> 45

<212> PRT

<213> Homo sapiens

<400> 113

Met Phe Ile Ile Phe Ile Phe Lys Val Cys Val Ile Phe Leu Ser Met
 1 5 10 15

Tyr Ser Ile His Met Val Cys Leu Ser Val Ser Gln Thr Cys Leu Leu
 20 25 30

Tyr Ser Phe Ile Ile Met Leu Ala Thr Ser Trp Ile Leu
 35 40 45

<210> 114
 <211> 44
 <212> PRT
 <213> Homo sapiens

<400> 114
 Met Arg Thr Gly Cys Gln Ala Gln Cys Thr Pro Leu Thr Val Asn Glu
 1 5 10 15

Ser Glu Leu Gly Phe Leu Tyr Cys Phe Leu Cys Asn Met Ile Ala Glu
 20 25 30

Thr His Phe Lys Asn Ser Glu Ala Cys His Ser Cys
 35 40

<210> 115
 <211> 41
 <212> PRT
 <213> Homo sapiens

<400> 115
 Val Met Ala Tyr Tyr Ser Gly Gln Val Cys Pro Ala Gln Gly Val Ile
 1 5 10 15

Ser Gly Gly Phe Gln Thr Cys Thr Gln Phe Lys Asp Gly Gly Asp Arg
 20 25 30

Leu Cys Leu Tyr Leu Val Asn Pro Thr
 35 40

<210> 116
 <211> 39
 <212> PRT
 <213> Homo sapiens

<400> 116
 Met Ile Ser Ala His Cys Asp Leu Arg Leu Leu Gly Ser Ser Asp Ser
 1 5 10 15

Pro Ala Ser Ala Ser Arg Val Ala Gly Ile Thr Gly Met Arg His His
 20 25 30

Ala Arg Leu Ile Leu Tyr Phe
35

<210> 117
<211> 39
<212> PRT
<213> Homo sapiens

<400> 117
Met Glu Asp Phe Phe Leu Thr Ala Leu Phe Phe Met Ala Phe Ser Lys
1 5 10 15

Arg Phe Lys Cys Ser Leu Phe Phe Lys Trp Gly Ser Leu Gly Arg Gly
20 25 30

Lys Val Cys Pro His His Leu
35

<210> 118
<211> 39
<212> PRT
<213> Homo sapiens

<400> 118
Met Leu Glu Ala Leu Trp Asn Ser Pro Ile Pro Pro Pro Phe Tyr Ile
1 5 10 15

Ser Leu Pro Thr Leu Ala Pro Met Leu Leu Val Pro Leu Gln Cys Ile
20 25 30

Pro Thr Gln Gly Ser Ile Pro
35

<210> 119
<211> 34
<212> PRT
<213> Homo sapiens

<400> 119
Met Tyr Ser Thr Lys Met Glu Pro Tyr Ala Trp Ala Leu Gly Ile Gln
1 5 10 15

Ala Ser Ile Ser Ala Gln Thr Ser Leu Leu Glu Phe Leu Leu Met Leu
20 25 30

Ala Pro

<210> 120
 <211> 33
 <212> PRT
 <213> Homo sapiens

<400> 120
 Met Val Ser Ser Pro Gln Gly Gly Glu Ala Thr His Thr Met Leu Lys
 1 5 10 15

Ile Asn Thr Lys Asn Lys His Lys Val Arg Leu Val Leu His Met Cys
 20 25 30

Asp

<210> 121
 <211> 53
 <212> PRT
 <213> Homo sapiens

<400> 121
 Asn Asp Ile Phe Leu Val Ala Val His Glu Leu Gly His Ala Leu Gly
 1 5 10 15

Leu Glu His Ser Ser Asp Pro Ser Ala Ile Met Ala Pro Phe Tyr Gln
 20 25 30

Trp Met Asp Thr Glu Asn Phe Val Leu Pro Asp Asp Asp Arg Arg Gly
 35 40 45

Ile Gln Gln Leu Tyr
 50

<210> 122
 <211> 260
 <212> PRT
 <213> Homo sapiens

<400> 122
 Met Ser Pro Ala Pro Arg Pro Ser Arg Cys Leu Leu Leu Pro Leu Leu
 1 5 10 15

Thr Leu Gly Thr Ala Leu Ala Ser Leu Gly Ser Ala Gln Ser Ser Ser
 20 25 30

Phe	Ser	Pro	Glu	Ala	Trp	Leu	Gln	Gln	Tyr	Gly	Tyr	Leu	Pro	Pro	Gly
		35					40					45			
Asp	Leu	Arg	Thr	His	Thr	Gln	Arg	Ser	Pro	Gln	Ser	Leu	Ser	Ala	Ala
	50					55					60				
Ile	Ala	Ala	Met	Gln	Lys	Phe	Tyr	Gly	Leu	Gln	Val	Thr	Gly	Lys	Ala
65					70					75					80
Asp	Ala	Asp	Thr	Met	Lys	Ala	Met	Arg	Arg	Pro	Arg	Cys	Gly	Val	Pro
				85					90					95	
Asp	Lys	Phe	Gly	Ala	Glu	Ile	Lys	Ala	Asn	Val	Arg	Arg	Lys	Arg	Tyr
			100					105					110		
Ala	Ile	Gln	Gly	Leu	Lys	Trp	Gln	His	Asn	Glu	Ile	Thr	Phe	Cys	Ile
		115					120					125			
Gln	Asn	Tyr	Thr	Pro	Lys	Val	Gly	Glu	Tyr	Ala	Thr	Tyr	Glu	Ala	Ile
	130					135					140				
Arg	Lys	Ala	Phe	Arg	Val	Trp	Glu	Ser	Ala	Thr	Pro	Leu	Arg	Phe	Arg
145					150					155					160
Glu	Val	Pro	Tyr	Ala	Tyr	Ile	Arg	Glu	Gly	His	Glu	Lys	Gln	Ala	Asp
				165					170					175	
Ile	Met	Ile	Phe	Phe	Ala	Glu	Gly	Phe	His	Gly	Asp	Ser	Thr	Pro	Phe
			180					185					190		
Asp	Gly	Glu	Gly	Gly	Phe	Leu	Ala	His	Ala	Tyr	Phe	Pro	Gly	Pro	Asn
		195					200					205			
Ile	Gly	Gly	Asp	Thr	His	Phe	Asp	Ser	Ala	Glu	Pro	Trp	Thr	Val	Arg
	210					215					220				
Asn	Glu	Asp	Leu	Asn	Gly	Asn	Asp	Ile	Phe	Leu	Val	Ala	Val	His	Glu
225					230					235					240
Leu	Gly	His	Ala	Leu	Gly	Leu	Glu	His	Ser	Ser	Asp	Pro	Ser	Ala	Ile
				245					250					255	

Met Ala Pro Gly
260

<210> 123
<211> 53
<212> PRT
<213> Homo sapiens

<400> 123
Asn Asp Ile Phe Leu Val Ala Val His Glu Leu Gly His Ala Leu Gly
1 5 10 15

Leu Glu His Ser Ser Asp Pro Ser Ala Ile Met Ala Pro Phe Tyr Gln
20 25 30

Trp Met Asp Thr Glu Asn Phe Val Leu Pro Asn Asp Asp Arg Arg Gly
35 40 45

Ile Gln Gln Leu Tyr
50

<210> 124
<211> 2273
<212> PRT
<213> Homo sapiens

<400> 124
Met Gly Phe Val Arg Gln Ile Gln Leu Leu Leu Trp Lys Asn Trp Thr
1 5 10 15

Leu Arg Lys Arg Gln Lys Ile Arg Phe Val Val Glu Leu Val Trp Pro
20 25 30

Leu Ser Leu Phe Leu Val Leu Ile Trp Leu Arg Asn Ala Asn Pro Leu
35 40 45

Tyr Ser His His Glu Cys His Phe Pro Asn Lys Ala Met Pro Ser Ala
50 55 60

Gly Met Leu Pro Trp Leu Gln Gly Ile Phe Cys Asn Val Asn Asn Pro
65 70 75 80

Cys Phe Gln Ser Pro Thr Pro Gly Glu Ser Pro Gly Ile Val Ser Asn
85 90 95

Tyr Asn Asn Ser Ile Leu Ala Arg Val Tyr Arg Asp Phe Gln Glu Leu
 100 105 110

Leu Met Asn Ala Pro Glu Ser Gln His Leu Gly Arg Ile Trp Thr Glu
 115 120 125

Leu His Ile Leu Ser Gln Phe Met Asp Thr Leu Arg Thr His Pro Glu
 130 135 140

Arg Ile Ala Gly Arg Gly Ile Arg Ile Arg Asp Ile Leu Lys Asp Glu
 145 150 155 160

Glu Thr Leu Thr Leu Phe Leu Ile Lys Asn Ile Gly Leu Ser Asp Ser
 165 170 175

Val Val Tyr Leu Leu Ile Asn Ser Gln Val Arg Pro Glu Gln Phe Ala
 180 185 190

His Gly Val Pro Asp Leu Ala Leu Lys Asp Ile Ala Cys Ser Glu Ala
 195 200 205

Leu Leu Glu Arg Phe Ile Ile Phe Ser Gln Arg Arg Gly Ala Lys Thr
 210 215 220

Val Arg Tyr Ala Leu Cys Ser Leu Ser Gln Gly Thr Leu Gln Trp Ile
 225 230 235 240

Glu Asp Thr Leu Tyr Ala Asn Val Asp Phe Phe Lys Leu Phe Arg Val
 245 250 255

Leu Pro Thr Leu Leu Asp Ser Arg Ser Gln Gly Ile Asn Leu Arg Ser
 260 265 270

Trp Gly Gly Ile Leu Ser Asp Met Ser Pro Arg Ile Gln Glu Phe Ile
 275 280 285

His Arg Pro Ser Met Gln Asp Leu Leu Trp Val Thr Arg Pro Leu Met
 290 295 300

Gln Asn Gly Gly Pro Glu Thr Phe Thr Lys Leu Met Gly Ile Leu Ser
 305 310 315 320

Asp Leu Leu Cys Gly Tyr Pro Glu Gly Gly Gly Ser Arg Val Leu Ser
 325 330 335

Phe Asn Trp Tyr Glu Asp Asn Asn Tyr Lys Ala Phe Leu Gly Ile Asp
 340 345 350

Ser Thr Arg Lys Asp Pro Ile Tyr Ser Tyr Asp Arg Arg Thr Thr Ser
 355 360 365

Phe Cys Asn Ala Leu Ile Gln Ser Leu Glu Ser Asn Pro Leu Thr Lys
 370 375 380

Ile Ala Trp Arg Ala Ala Lys Pro Leu Leu Met Gly Lys Ile Leu Tyr
 385 390 395 400

Thr Pro Asp Ser Pro Ala Ala Arg Arg Ile Leu Lys Asn Ala Asn Ser
 405 410 415

Thr Phe Glu Glu Leu Glu His Val Arg Lys Leu Val Lys Ala Trp Glu
 420 425 430

Glu Val Gly Pro Gln Ile Trp Tyr Phe Phe Asp Asn Ser Thr Gln Met
 435 440 445

Asn Met Ile Arg Asp Thr Leu Gly Asn Pro Thr Val Lys Asp Phe Leu
 450 455 460

Asn Arg Gln Leu Gly Glu Glu Gly Ile Thr Ala Glu Ala Ile Leu Asn
 465 470 475 480

Phe Leu Tyr Lys Gly Pro Arg Glu Ser Gln Ala Asp Asp Met Ala Asn
 485 490 495

Phe Asp Trp Arg Asp Ile Phe Asn Ile Thr Asp Arg Thr Leu Arg Leu
 500 505 510

Val Asn Gln Tyr Leu Glu Cys Leu Val Leu Asp Lys Phe Glu Ser Tyr
 515 520 525

Asn Asp Glu Thr Gln Leu Thr Gln Arg Ala Leu Ser Leu Leu Glu Glu
 530 535 540

Asn Met Phe Trp Ala Gly Val Val Phe Pro Asp Met Tyr Pro Trp Thr
 545 550 555 560

Ser Ser Leu Pro Pro His Val Lys Tyr Lys Ile Arg Met Asp Ile Asp
 565 570 575

Val Val Glu Lys Thr Asn Lys Ile Lys Asp Arg Tyr Trp Asp Ser Gly
 580 585 590

Pro Arg Ala Asp Pro Val Glu Asp Phe Arg Tyr Ile Trp Gly Gly Phe
 595 600 605

Ala Tyr Leu Gln Asp Met Val Glu Gln Gly Ile Thr Arg Ser Gln Val
 610 615 620

Gln Ala Glu Ala Pro Val Gly Ile Tyr Leu Gln Gln Met Pro Tyr Pro
 625 630 635 640

Cys Phe Val Asp Asp Ser Phe Met Ile Ile Leu Asn Arg Cys Phe Pro
 645 650 655

Ile Phe Met Val Leu Ala Trp Ile Tyr Ser Val Ser Met Thr Val Lys
 660 665 670

Ser Ile Val Leu Glu Lys Glu Leu Arg Leu Lys Glu Thr Leu Lys Asn
 675 680 685

Gln Gly Val Ser Asn Ala Val Ile Trp Cys Thr Trp Phe Leu Asp Ser
 690 695 700

Phe Ser Ile Met Ser Met Ser Ile Phe Leu Leu Thr Ile Phe Ile Met
 705 710 715 720

His Gly Arg Ile Leu His Tyr Ser Asp Pro Phe Ile Leu Phe Leu Phe
 725 730 735

Leu Leu Ala Phe Ser Thr Ala Thr Ile Met Leu Cys Phe Leu Leu Ser
 740 745 750

Thr Phe Phe Ser Lys Ala Ser Leu Ala Ala Ala Cys Ser Gly Val Ile
 755 760 765

Tyr Phe Thr Leu Tyr Leu Pro His Ile Leu Cys Phe Ala Trp Gln Asp
 770 775 780

Arg Met Thr Ala Glu Leu Lys Lys Ala Val Ser Leu Leu Ser Pro Val
 785 790 795 800

Ala Phe Gly Phe Gly Thr Glu Tyr Leu Val Arg Phe Glu Glu Gln Gly
 805 810 815

Leu Gly Leu Gln Trp Ser Asn Ile Gly Asn Ser Pro Thr Glu Gly Asp
 820 825 830

Glu Phe Ser Phe Leu Leu Ser Met Glu Met Met Leu Leu Asp Ala Ala
 835 840 845

Cys Tyr Gly Leu Leu Ala Trp Tyr Leu Asp Gln Val Phe Pro Gly Asp
 850 855 860

Tyr Gly Thr Pro Leu Pro Trp Tyr Phe Leu Leu Gln Glu Ser Tyr Trp
 865 870 875 880

Leu Ser Gly Glu Gly Cys Ser Thr Arg Glu Glu Arg Ala Leu Glu Lys
 885 890 895

Thr Glu Pro Leu Thr Glu Glu Thr Glu Asp Pro Glu His Pro Glu Gly
 900 905 910

Ile His Asp Ser Phe Phe Glu Arg Glu His Pro Gly Trp Val Pro Gly
 915 920 925

Val Cys Val Lys Asn Leu Val Lys Ile Phe Glu Pro Cys Gly Arg Pro
 930 935 940

Ala Val Asp Arg Leu Asn Ile Thr Phe Tyr Glu Asn Gln Ile Thr Ala
 945 950 955 960

Phe Leu Gly His Asn Gly Ala Gly Lys Thr Thr Thr Leu Ser Ile Leu
 965 970 975

Thr Gly Leu Leu Pro Pro Thr Ser Gly Thr Val Leu Val Gly Gly Arg
 980 985 990

Asp	Ile	Glu	Thr	Ser	Leu	Asp	Ala	Val	Arg	Gln	Ser	Leu	Gly	Met	Cys
		995					1000					1005			
Pro	Gln	His	Asn	Ile	Leu	Phe	His	His	Leu	Thr	Val	Ala	Glu	His	
	1010					1015					1020				
Met	Leu	Phe	Tyr	Ala	Gln	Leu	Lys	Gly	Lys	Ser	Gln	Glu	Glu	Ala	
	1025					1030					1035				
Gln	Leu	Glu	Met	Glu	Ala	Met	Leu	Glu	Asp	Thr	Gly	Leu	His	His	
	1040					1045					1050				
Lys	Arg	Asn	Glu	Glu	Ala	Gln	Asp	Leu	Ser	Gly	Gly	Met	Gln	Arg	
	1055					1060					1065				
Lys	Leu	Ser	Val	Ala	Ile	Ala	Phe	Val	Gly	Asp	Ala	Lys	Val	Val	
	1070					1075					1080				
Ile	Leu	Asp	Glu	Pro	Thr	Ser	Gly	Val	Asp	Pro	Tyr	Ser	Arg	Arg	
	1085					1090					1095				
Ser	Ile	Trp	Asp	Leu	Leu	Leu	Lys	Tyr	Arg	Ser	Gly	Arg	Thr	Ile	
	1100					1105					1110				
Ile	Met	Pro	Thr	His	His	Met	Asp	Glu	Ala	Asp	His	Gln	Gly	Asp	
	1115					1120					1125				
Arg	Ile	Ala	Ile	Ile	Ala	Gln	Gly	Arg	Leu	Tyr	Cys	Ser	Gly	Thr	
	1130					1135					1140				
Pro	Leu	Phe	Leu	Lys	Asn	Cys	Phe	Gly	Thr	Gly	Leu	Tyr	Leu	Thr	
	1145					1150					1155				
Leu	Val	Arg	Lys	Met	Lys	Asn	Ile	Gln	Ser	Gln	Arg	Lys	Gly	Ser	
	1160					1165					1170				
Glu	Gly	Thr	Cys	Ser	Cys	Ser	Ser	Lys	Gly	Phe	Ser	Thr	Thr	Cys	
	1175					1180					1185				
Pro	Ala	His	Val	Asp	Asp	Leu	Thr	Pro	Glu	Gln	Val	Leu	Asp	Gly	
	1190					1195					1200				

Asp Val	Asn Glu Leu Met	Asp Val Val Leu His His	Val Pro Glu
1205		1210	1215
Ala Lys	Leu Val Glu Cys Ile	Gly Gln Glu Leu Ile	Phe Leu Leu
1220		1225	1230
Pro Asn	Lys Asn Phe Lys His	Arg Ala Tyr Ala Ser	Leu Phe Arg
1235		1240	1245
Glu Leu	Glu Glu Thr Leu Ala	Asp Leu Gly Leu Ser	Ser Phe Gly
1250		1255	1260
Ile Ser	Asp Thr Pro Leu Glu	Glu Ile Phe Leu Lys	Val Thr Glu
1265		1270	1275
Asp Ser	Asp Ser Gly Pro Leu	Phe Ala Gly Gly Ala	Gln Gln Lys
1280		1285	1290
Arg Glu	Asn Val Asn Pro Arg	His Pro Cys Leu Gly	Pro Arg Glu
1295		1300	1305
Lys Ala	Gly Gln Thr Pro Gln	Asp Ser Asn Val Cys	Ser Pro Gly
1310		1315	1320
Ala Pro	Ala Ala His Pro Glu	Gly Gln Pro Pro Pro	Glu Pro Glu
1325		1330	1335
Cys Pro	Gly Pro Gln Leu Asn	Thr Gly Thr Gln Leu	Val Leu Gln
1340		1345	1350
His Val	Gln Ala Leu Leu Val	Lys Arg Phe Gln His	Thr Ile Arg
1355		1360	1365
Ser His	Lys Asp Phe Leu Ala	Gln Ile Val Leu Pro	Ala Thr Phe
1370		1375	1380
Val Phe	Leu Ala Leu Met Leu	Ser Ile Val Ile Leu	Pro Phe Gly
1385		1390	1395
Glu Tyr	Pro Ala Leu Thr Leu	His Pro Trp Ile Tyr	Gly Gln Gln
1400		1405	1410

Tyr	Thr	Phe	Phe	Ser	Met	Asp	Glu	Pro	Gly	Ser	Glu	Gln	Phe	Thr
1415						1420					1425			
Val	Leu	Ala	Asp	Val	Leu	Leu	Asn	Lys	Pro	Gly	Phe	Gly	Asn	Arg
1430						1435					1440			
Cys	Leu	Lys	Glu	Gly	Trp	Leu	Pro	Glu	Tyr	Pro	Cys	Gly	Asn	Ser
1445						1450					1455			
Thr	Pro	Trp	Lys	Thr	Pro	Ser	Val	Ser	Pro	Asn	Ile	Thr	Gln	Leu
1460						1465					1470			
Phe	Gln	Lys	Gln	Lys	Trp	Thr	Gln	Val	Asn	Pro	Ser	Pro	Ser	Cys
1475						1480					1485			
Arg	Cys	Ser	Thr	Arg	Glu	Lys	Leu	Thr	Met	Leu	Pro	Glu	Cys	Pro
1490						1495					1500			
Glu	Gly	Ala	Gly	Gly	Leu	Pro	Pro	Pro	Gln	Arg	Thr	Gln	Arg	Ser
1505						1510					1515			
Thr	Glu	Ile	Leu	Gln	Asp	Leu	Thr	Asp	Arg	Asn	Ile	Ser	Asp	Phe
1520						1525					1530			
Leu	Val	Lys	Thr	Tyr	Pro	Ala	Leu	Ile	Arg	Ser	Ser	Leu	Lys	Ser
1535						1540					1545			
Lys	Phe	Trp	Val	Asn	Glu	Gln	Arg	Tyr	Gly	Gly	Ile	Ser	Ile	Gly
1550						1555					1560			
Gly	Lys	Leu	Pro	Val	Val	Pro	Ile	Thr	Gly	Glu	Ala	Leu	Val	Gly
1565						1570					1575			
Phe	Leu	Ser	Asp	Leu	Gly	Arg	Ile	Met	Asn	Val	Ser	Gly	Gly	Pro
1580						1585					1590			
Ile	Thr	Arg	Glu	Ala	Ser	Lys	Glu	Ile	Pro	Asp	Phe	Leu	Lys	His
1595						1600					1605			
Leu	Glu	Thr	Glu	Asp	Asn	Ile	Lys	Val	Trp	Phe	Asn	Asn	Lys	Gly
1610						1615					1620			

Trp His	Ala Leu Val Ser	Phe	Leu Asn Val Ala His	Asn Ala Ile
1625		1630		1635
Leu Arg	Ala Ser Leu Pro	Lys	Asp Arg Ser Pro	Glu Glu Tyr Gly
1640		1645		1650
Ile Thr	Val Ile Ser Gln	Pro	Leu Asn Leu Thr	Lys Glu Gln Leu
1655		1660		1665
Ser Glu	Ile Thr Val Leu	Thr	Thr Ser Val Asp	Ala Val Val Ala
1670		1675		1680
Ile Cys	Val Ile Phe Ser	Met	Ser Phe Val Pro	Ala Ser Phe Val
1685		1690		1695
Leu Tyr	Leu Ile Gln Glu	Arg	Val Asn Lys Ser	Lys His Leu Gln
1700		1705		1710
Phe Ile	Ser Gly Val Ser	Pro	Thr Thr Tyr Trp	Val Thr Asn Phe
1715		1720		1725
Leu Trp	Asp Ile Met Asn	Tyr	Ser Val Ser Ala	Gly Leu Val Val
1730		1735		1740
Gly Ile	Phe Ile Gly Phe	Gln	Lys Lys Ala Tyr	Thr Ser Pro Glu
1745		1750		1755
Asn Leu	Pro Ala Leu Val	Ala	Leu Leu Leu Leu	Tyr Gly Trp Ala
1760		1765		1770
Val Ile	Pro Met Met Tyr	Pro	Ala Ser Phe Leu	Phe Asp Val Pro
1775		1780		1785
Ser Thr	Ala Tyr Val Ala	Leu	Ser Cys Ala Asn	Leu Phe Ile Gly
1790		1795		1800
Ile Asn	Ser Ser Ala Ile	Thr	Phe Ile Leu Glu	Leu Phe Asp Asn
1805		1810		1815
Asn Arg	Thr Leu Leu Arg	Phe	Asn Ala Val Leu	Arg Lys Leu Leu
1820		1825		1830

Ile Val 1835	Phe Pro His Phe Cys 1840	Leu Gly Arg Gly Leu 1845	Ile Asp Leu
Ala Leu 1850	Ser Gln Ala Val Thr 1855	Asp Val Tyr Ala Arg 1860	Phe Gly Glu
Glu His 1865	Ser Ala Asn Pro Phe 1870	His Trp Asp Leu Ile 1875	Gly Lys Asn
Leu Phe 1880	Ala Met Val Val Glu 1885	Gly Val Val Tyr Phe 1890	Leu Leu Thr
Leu Leu 1895	Val Gln Arg His Phe 1900	Phe Leu Ser Gln Trp 1905	Ile Ala Glu
Pro Thr 1910	Lys Glu Pro Ile Val 1915	Asp Glu Asp Asp Asp 1920	Val Ala Glu
Glu Arg 1925	Gln Arg Ile Ile Thr 1930	Gly Gly Asn Lys Thr 1935	Asp Ile Leu
Arg Leu 1940	His Glu Leu Thr Lys 1945	Ile Tyr Leu Gly Thr 1950	Ser Ser Pro
Ala Val 1955	Asp Arg Leu Cys Val 1960	Gly Val Arg Pro Gly 1965	Glu Cys Phe
Gly Leu 1970	Leu Gly Val Asn Gly 1975	Ala Gly Lys Thr Thr 1980	Thr Phe Lys
Met Leu 1985	Thr Gly Asp Thr Thr 1990	Val Thr Ser Gly Asp 1995	Ala Thr Val
Ala Gly 2000	Lys Ser Ile Leu Thr 2005	Asn Ile Ser Glu Val 2010	His Gln Asn
Met Gly 2015	Tyr Cys Pro Gln Phe 2020	Asp Ala Ile Asp Glu 2025	Leu Leu Thr
Gly Arg 2030	Glu His Leu Tyr Leu 2035	Tyr Ala Arg Leu Arg 2040	Gly Val Pro

Ala Glu	Glu Ile Glu Lys Val	Ala Asn Trp Ser Ile	Lys Ser Leu
2045	2050	2055	
Gly Leu	Thr Val Tyr Ala Asp	Cys Leu Ala Gly Thr	Tyr Ser Gly
2060	2065	2070	
Gly Asn	Lys Arg Lys Leu Ser	Thr Ala Ile Ala Leu	Ile Gly Cys
2075	2080	2085	
Pro Pro	Leu Val Leu Leu Asp	Glu Pro Thr Thr Gly	Met Asp Pro
2090	2095	2100	
Gln Ala	Arg Arg Met Leu Trp	Asn Val Ile Val Ser	Ile Ile Arg
2105	2110	2115	
Lys Gly	Arg Ala Val Val Leu	Thr Ser His Ser Met	Glu Glu Cys
2120	2125	2130	
Glu Ala	Leu Cys Thr Arg Leu	Ala Ile Met Val Lys	Gly Ala Phe
2135	2140	2145	
Arg Cys	Met Gly Thr Ile Gln	His Leu Lys Ser Lys	Phe Gly Asp
2150	2155	2160	
Gly Tyr	Ile Val Thr Met Lys	Ile Lys Ser Pro Lys	Asp Asp Leu
2165	2170	2175	
Leu Pro	Asp Leu Asn Pro Val	Glu Gln Phe Phe Gln	Gly Asn Phe
2180	2185	2190	
Pro Gly	Ser Val Gln Arg Glu	Arg His Tyr Asn Met	Leu Gln Phe
2195	2200	2205	
Gln Val	Ser Ser Ser Ser Leu	Ala Arg Ile Phe Gln	Leu Leu Leu
2210	2215	2220	
Ser His	Lys Asp Ser Leu Leu	Ile Glu Glu Tyr Ser	Val Thr Gln
2225	2230	2235	
Thr Thr	Leu Asp Gln Val Phe	Val Asn Phe Ala Lys	Gln Gln Thr
2240	2245	2250	

Glu Ser His Asp Leu Pro Leu His Pro Arg Ala Ala Gly Ala Ser
 2255 2260 2265

Arg Gln Ala Gln Asp
 2270

<210> 125

<211> 317

<212> PRT

<213> Homo sapiens

<400> 125

Met Lys Val Leu Trp Ala Ala Leu Leu Val Thr Phe Leu Ala Gly Cys
 1 5 10 15

Gln Ala Lys Val Glu Gln Ala Val Glu Thr Glu Pro Glu Pro Glu Leu
 20 25 30

Arg Gln Gln Thr Glu Trp Gln Ser Gly Gln Arg Trp Glu Leu Ala Leu
 35 40 45

Gly Arg Phe Trp Asp Tyr Leu Arg Trp Val Gln Thr Leu Ser Glu Gln
 50 55 60

Val Gln Glu Glu Leu Leu Ser Ser Gln Val Thr Gln Glu Leu Arg Ala
 65 70 75 80

Leu Met Asp Glu Thr Met Lys Glu Leu Lys Ala Tyr Lys Ser Glu Leu
 85 90 95

Glu Glu Gln Leu Thr Pro Val Ala Glu Glu Thr Arg Ala Arg Leu Ser
 100 105 110

Lys Glu Leu Gln Ala Ala Gln Ala Arg Leu Gly Ala Asp Met Glu Asp
 115 120 125

Val Cys Gly Arg Leu Val Gln Tyr Arg Gly Glu Val Gln Ala Met Leu
 130 135 140

Gly Gln Ser Thr Glu Glu Leu Arg Val Arg Leu Ala Ser His Leu Arg
 145 150 155 160

Lys Leu Arg Lys Arg Leu Leu Arg Asp Ala Asp Asp Leu Gln Lys Arg
 165 170 175

Leu Ala Val Tyr Gln Ala Gly Ala Arg Glu Gly Ala Glu Arg Gly Leu
 180 185 190

Ser Ala Ile Arg Glu Arg Leu Gly Pro Leu Val Glu Gln Gly Arg Val
 195 200 205

Arg Ala Ala Thr Val Gly Ser Leu Ala Gly Gln Pro Leu Gln Glu Arg
 210 215 220

Ala Gln Ala Trp Gly Glu Arg Leu Arg Ala Arg Met Glu Glu Met Gly
 225 230 235 240

Ser Arg Thr Arg Asp Arg Leu Asp Glu Val Lys Glu Gln Val Ala Glu
 245 250 255

Val Arg Ala Lys Leu Glu Glu Gln Ala Gln Gln Ile Arg Leu Gln Ala
 260 265 270

Glu Ala Phe Gln Ala Arg Leu Lys Ser Trp Phe Glu Pro Leu Val Glu
 275 280 285

Asp Met Gln Arg Gln Trp Ala Gly Leu Val Glu Lys Val Gln Ala Ala
 290 295 300

Val Gly Thr Ser Ala Ala Pro Val Pro Ser Asp Asn His
 305 310 315

<210> 126
 <211> 374
 <212> PRT
 <213> Homo sapiens

<400> 126
 Met Leu Ser Thr Ser Arg Ser Arg Phe Ile Arg Asn Thr Asn Glu Ser
 1 5 10 15

Gly Glu Glu Val Thr Thr Phe Phe Asp Tyr Asp Tyr Gly Ala Pro Cys
 20 25 30

His Lys Phe Asp Val Lys Gln Ile Gly Ala Gln Leu Leu Pro Pro Leu
 35 40 45

Tyr Ser Leu Val Phe Ile Phe Gly Phe Val Gly Asn Met Leu Val Val
 50 55 60

Leu Ile Leu Ile Asn Cys Lys Lys Leu Lys Cys Leu Thr Asp Ile Tyr
 65 70 75 80

Leu Leu Asn Leu Ala Ile Ser Asp Leu Leu Phe Leu Ile Thr Leu Pro
 85 90 95

Leu Trp Ala His Ser Ala Ala Asn Glu Trp Val Phe Gly Asn Ala Met
 100 105 110

Cys Lys Leu Phe Thr Gly Leu Tyr His Ile Gly Tyr Phe Gly Gly Ile
 115 120 125

Phe Phe Ile Ile Leu Leu Thr Ile Asp Arg Tyr Leu Ala Ile Val His
 130 135 140

Ala Val Phe Ala Leu Lys Ala Arg Thr Val Thr Phe Gly Val Val Thr
 145 150 155 160

Ser Val Ile Thr Trp Leu Val Ala Val Phe Ala Ser Val Pro Gly Ile
 165 170 175

Ile Phe Thr Lys Cys Gln Lys Glu Asp Ser Val Tyr Val Cys Gly Pro
 180 185 190

Tyr Phe Pro Arg Gly Trp Asn Asn Phe His Thr Ile Met Arg Asn Ile
 195 200 205

Leu Gly Leu Val Leu Pro Leu Leu Ile Met Val Ile Cys Tyr Ser Gly
 210 215 220

Ile Leu Lys Thr Leu Leu Arg Cys Arg Asn Glu Lys Lys Arg His Arg
 225 230 235 240

Ala Val Arg Val Ile Phe Thr Ile Met Ile Val Tyr Phe Leu Phe Trp
 245 250 255

Thr Pro Tyr Asn Ile Val Ile Leu Leu Asn Thr Phe Gln Glu Phe Phe
 260 265 270

Gly Leu Ser Asn Cys Glu Ser Thr Ser Gln Leu Asp Gln Ala Thr Gln
 275 280 285

Val Thr Glu Thr Leu Gly Met Thr His Cys Cys Ile Asn Pro Ile Ile
290 295 300

Tyr Ala Phe Val Gly Glu Lys Phe Arg Ser Leu Phe His Ile Ala Leu
305 310 315 320

Gly Cys Arg Ile Ala Pro Leu Gln Lys Pro Val Cys Gly Gly Pro Gly
325 330 335

Val Arg Pro Gly Lys Asn Val Lys Val Thr Thr Gln Gly Leu Leu Asp
340 345 350

Gly Arg Gly Lys Gly Lys Ser Ile Gly Arg Ala Pro Glu Ala Ser Leu
355 360 365

Gln Asp Lys Glu Gly Ala
370

<210> 127

<211> 146

<212> PRT

<213> Homo sapiens

<400> 127

Met Ala Gly Pro Leu Arg Ala Pro Leu Leu Leu Leu Ala Ile Leu Ala
1 5 10 15

Val Ala Leu Ala Val Ser Pro Ala Ala Gly Ser Ser Pro Gly Lys Pro
20 25 30

Pro Arg Leu Val Gly Gly Pro Met Asp Ala Ser Val Glu Glu Gly
35 40 45

Val Arg Arg Ala Leu Asp Phe Ala Val Gly Glu Tyr Asn Lys Ala Ser
50 55 60

Asn Asp Met Tyr His Ser Arg Ala Leu Gln Val Val Arg Ala Arg Lys
65 70 75 80

Gln Ile Val Ala Gly Val Asn Tyr Phe Leu Asp Val Glu Leu Gly Arg
85 90 95

Thr Thr Cys Thr Lys Thr Gln Pro Asn Leu Asp Asn Cys Pro Phe His
100 105 110

Asp Gln Pro His Leu Lys Arg Lys Ala Phe Cys Ser Phe Gln Ile Tyr
 115 120 125

Ala Val Pro Trp Gln Gly Thr Met Thr Leu Ser Lys Ser Thr Cys Gln
 130 135 140

Asp Ala
 145

<210> 128
 <211> 5622
 <212> PRT
 <213> Homo sapiens

<400> 128
 Met Ile Ser Trp Glu Val Val His Thr Val Phe Leu Phe Ala Leu Leu
 1 5 10 15

Tyr Ser Ser Leu Ala Gln Asp Ala Ser Pro Gln Ser Glu Ile Arg Ala
 20 25 30

Glu Glu Ile Pro Glu Gly Ala Ser Thr Leu Ala Phe Val Phe Asp Val
 35 40 45

Thr Gly Ser Met Tyr Asp Asp Leu Val Gln Val Ile Glu Gly Ala Ser
 50 55 60

Lys Ile Leu Glu Thr Ser Leu Lys Arg Pro Lys Arg Pro Leu Phe Asn
 65 70 75 80

Phe Ala Leu Val Pro Phe His Asp Pro Glu Ile Gly Pro Val Thr Ile
 85 90 95

Thr Thr Asp Pro Lys Lys Phe Gln Tyr Glu Leu Arg Glu Leu Tyr Val
 100 105 110

Gln Gly Gly Gly Asp Cys Pro Glu Met Ser Ile Gly Ala Ile Lys Ile
 115 120 125

Ala Leu Glu Ile Ser Leu Pro Gly Ser Phe Ile Tyr Val Phe Thr Asp
 130 135 140

Ala Arg Ser Lys Asp Tyr Arg Leu Thr His Glu Val Leu Gln Leu Ile
 145 150 155 160

Gln Gln Lys Gln Ser Gln Val Val Phe Val Leu Thr Gly Asp Cys Asp
 165 170 175

Asp Arg Thr His Ile Gly Tyr Lys Val Tyr Glu Glu Ile Ala Ser Thr
 180 185 190

Ser Ser Gly Gln Val Phe His Leu Asp Lys Lys Gln Val Asn Glu Val
 195 200 205

Leu Lys Trp Val Glu Glu Ala Val Gln Ala Ser Lys Val His Leu Leu
 210 215 220

Ser Thr Asp His Leu Glu Gln Ala Val Asn Thr Trp Arg Ile Pro Phe
 225 230 235 240

Asp Pro Ser Leu Lys Glu Val Thr Val Ser Leu Ser Gly Pro Ser Pro
 245 250 255

Met Ile Glu Ile Arg Asn Pro Leu Gly Lys Leu Ile Lys Lys Gly Phe
 260 265 270

Gly Leu His Glu Leu Leu Asn Ile His Asn Ser Ala Lys Val Val Asn
 275 280 285

Val Lys Glu Pro Glu Ala Gly Met Trp Thr Val Lys Thr Ser Ser Ser
 290 295 300

Gly Arg His Ser Val Arg Ile Thr Gly Leu Ser Thr Ile Asp Phe Arg
 305 310 315 320

Ala Gly Phe Ser Arg Lys Pro Thr Leu Asp Phe Lys Lys Thr Val Ser
 325 330 335

Arg Pro Val Gln Gly Ile Pro Thr Tyr Val Leu Leu Asn Thr Ser Gly
 340 345 350

Ile Ser Thr Pro Ala Arg Ile Asp Leu Leu Glu Leu Leu Ser Ile Ser
 355 360 365

Gly Ser Ser Leu Lys Thr Ile Pro Val Lys Tyr Tyr Pro His Arg Lys
 370 375 380

Pro Tyr Gly Ile Trp Asn Ile Ser Asp Phe Val Pro Pro Asn Glu Ala
 385 390 395 400

Phe Phe Leu Lys Val Thr Gly Tyr Asp Lys Asp Asp Tyr Leu Phe Gln
 405 410 415

Arg Val Ser Ser Val Ser Phe Ser Ser Ile Val Pro Asp Ala Pro Lys
 420 425 430

Val Thr Met Pro Glu Lys Thr Pro Gly Tyr Tyr Leu Gln Pro Gly Gln
 435 440 445

Ile Pro Cys Ser Val Asp Ser Leu Leu Pro Phe Thr Leu Ser Phe Val
 450 455 460

Arg Asn Gly Val Thr Leu Gly Val Asp Gln Tyr Leu Lys Glu Ser Ala
 465 470 475 480

Ser Val Asn Leu Asp Ile Ala Lys Val Thr Leu Ser Asp Glu Gly Phe
 485 490 495

Tyr Glu Cys Ile Ala Val Ser Ser Ala Gly Thr Gly Arg Ala Gln Thr
 500 505 510

Phe Phe Asp Val Ser Glu Pro Pro Pro Val Ile Gln Val Pro Asn Asn
 515 520 525

Val Thr Val Thr Pro Gly Glu Arg Ala Val Leu Thr Cys Leu Ile Ile
 530 535 540

Ser Ala Val Asp Tyr Asn Leu Thr Trp Gln Arg Asn Asp Arg Asp Val
 545 550 555 560

Arg Leu Ala Glu Pro Ala Arg Ile Arg Thr Leu Ala Asn Leu Ser Leu
 565 570 575

Glu Leu Lys Ser Val Lys Phe Asn Asp Ala Gly Glu Tyr His Cys Met
 580 585 590

Val Ser Ser Glu Gly Gly Ser Ser Ala Ala Ser Val Phe Leu Thr Val
 595 600 605

Gln Glu Pro Pro Lys Val Thr Val Met Pro Lys Asn Gln Ser Phe Thr
 610 615 620

Gly Gly Ser Glu Val Ser Ile Met Cys Ser Ala Thr Gly Tyr Pro Lys
 625 630 635 640

Pro Lys Ile Ala Trp Thr Val Asn Asp Met Phe Ile Val Gly Ser His
 645 650 655

Arg Tyr Arg Met Thr Ser Asp Gly Thr Leu Phe Ile Lys Asn Ala Ala
 660 665 670

Pro Lys Asp Ala Gly Ile Tyr Gly Cys Leu Ala Ser Asn Ser Ala Gly
 675 680 685

Thr Asp Lys Gln Asn Ser Thr Leu Arg Tyr Ile Glu Ala Pro Lys Leu
 690 695 700

Met Val Val Gln Ser Glu Leu Leu Val Ala Leu Gly Asp Ile Thr Val
 705 710 715 720

Met Glu Cys Lys Thr Ser Gly Ile Pro Pro Pro Gln Val Lys Trp Phe
 725 730 735

Lys Gly Asp Leu Glu Leu Arg Pro Ser Thr Phe Leu Ile Ile Asp Pro
 740 745 750

Leu Leu Gly Leu Leu Lys Ile Gln Glu Thr Gln Asp Leu Asp Ala Gly
 755 760 765

Asp Tyr Thr Cys Val Ala Ile Asn Glu Ala Gly Arg Ala Thr Gly Lys
 770 775 780

Ile Thr Leu Asp Val Gly Ser Pro Pro Val Phe Ile Gln Glu Pro Ala
 785 790 795 800

Asp Val Ser Met Glu Ile Gly Ser Asn Val Thr Leu Pro Cys Tyr Val
 805 810 815

Gln Gly Tyr Pro Glu Pro Thr Ile Lys Trp Arg Arg Leu Asp Asn Met
 820 825 830

Pro Ile Phe Ser Arg Pro Phe Ser Val Ser Ser Ile Ser Gln Leu Arg
 835 840 845

Thr Gly Ala Leu Phe Ile Leu Asn Leu Trp Ala Ser Asp Lys Gly Thr
 850 855 860

Tyr Ile Cys Glu Ala Glu Asn Gln Phe Gly Lys Ile Gln Ser Glu Thr
 865 870 875 880

Thr Val Thr Val Thr Gly Leu Val Ala Pro Leu Ile Gly Ile Ser Pro
 885 890 895

Ser Val Ala Asn Val Ile Glu Gly Gln Gln Leu Thr Leu Pro Cys Thr
 900 905 910

Leu Leu Ala Gly Asn Pro Ile Pro Glu Arg Arg Trp Ile Lys Asn Ser
 915 920 925

Ala Met Leu Leu Gln Asn Pro Tyr Ile Thr Val Arg Ser Asp Gly Ser
 930 935 940

Leu His Ile Glu Arg Val Gln Leu Gln Asp Gly Gly Glu Tyr Thr Cys
 945 950 955 960

Val Ala Ser Asn Val Ala Gly Thr Asn Asn Lys Thr Thr Ser Val Val
 965 970 975

Val His Val Leu Pro Thr Ile Gln His Gly Gln Gln Ile Leu Ser Thr
 980 985 990

Ile Glu Gly Ile Pro Val Thr Leu Pro Cys Lys Ala Ser Gly Asn Pro
 995 1000 1005

Lys Pro Ser Val Ile Trp Ser Lys Lys Gly Glu Leu Ile Ser Thr
 1010 1015 1020

Ser Ser Ala Lys Phe Ser Ala Gly Ala Asp Gly Ser Leu Tyr Val
 1025 1030 1035

Val Ser	Pro Gly Gly Glu Glu	Ser Gly Glu Tyr Val	Cys Thr Ala
1040	1045	1050	
Thr Asn	Thr Ala Gly Tyr Ala	Lys Arg Lys Val Gln	Leu Thr Val
1055	1060	1065	
Tyr Val	Arg Pro Arg Val Phe	Gly Asp Gln Arg Gly	Leu Ser Gln
1070	1075	1080	
Asp Lys	Pro Val Glu Ile Ser	Val Leu Ala Gly Glu	Glu Val Thr
1085	1090	1095	
Leu Pro	Cys Glu Val Lys Ser	Leu Pro Pro Pro Ile	Ile Thr Trp
1100	1105	1110	
Ala Lys	Glu Thr Gln Leu Ile	Ser Pro Phe Ser Pro	Arg His Thr
1115	1120	1125	
Phe Leu	Pro Ser Gly Ser Met	Lys Ile Thr Glu Thr	Arg Thr Ser
1130	1135	1140	
Asp Ser	Gly Met Tyr Leu Cys	Val Ala Thr Asn Ile	Ala Gly Asn
1145	1150	1155	
Val Thr	Gln Ala Val Lys Leu	Asn Val His Val Pro	Pro Lys Ile
1160	1165	1170	
Gln Arg	Gly Pro Lys His Leu	Lys Val Gln Val Gly	Gln Arg Val
1175	1180	1185	
Asp Ile	Pro Cys Asn Ala Gln	Gly Thr Pro Leu Pro	Val Ile Thr
1190	1195	1200	
Trp Ser	Lys Gly Gly Ser Thr	Met Leu Val Asp Gly	Glu His His
1205	1210	1215	
Val Ser	Asn Pro Asp Gly Thr	Leu Ser Ile Asp Gln	Ala Thr Pro
1220	1225	1230	
Ser Asp	Ala Gly Ile Tyr Thr	Cys Val Ala Thr Asn	Ile Ala Gly
1235	1240	1245	

Thr Asp	Glu Thr	Glu Ile	Thr	Leu His	Val Gln	Glu	Pro Pro	Thr
1250			1255			1260		
Val Glu	Asp Leu	Glu Pro	Pro	Tyr Asn	Thr Thr	Phe	Gln Glu	Arg
1265			1270			1275		
Val Ala	Asn Gln	Arg Ile	Glu	Phe Pro	Cys Pro	Ala	Lys Gly	Thr
1280			1285			1290		
Pro Lys	Pro Thr	Ile Lys	Trp	Leu His	Asn Gly	Arg	Glu Leu	Thr
1295			1300			1305		
Gly Arg	Glu Pro	Gly Ile	Ser	Ile Leu	Glu Asp	Gly	Thr Leu	Leu
1310			1315			1320		
Val Ile	Ala Ser	Val Thr	Pro	Tyr Asp	Asn Gly	Glu	Tyr Ile	Cys
1325			1330			1335		
Val Ala	Val Asn	Glu Ala	Gly	Thr Thr	Glu Arg	Lys	Tyr Asn	Leu
1340			1345			1350		
Lys Val	His Val	Pro Pro	Val	Ile Lys	Asp Lys	Glu	Gln Val	Thr
1355			1360			1365		
Asn Val	Ser Val	Leu Leu	Asn	Gln Leu	Thr Asn	Leu	Phe Cys	Glu
1370			1375			1380		
Val Glu	Gly Thr	Pro Ser	Pro	Ile Ile	Met Trp	Tyr	Lys Asp	Asn
1385			1390			1395		
Val Gln	Val Thr	Glu Ser	Ser	Thr Ile	Gln Thr	Val	Asn Asn	Gly
1400			1405			1410		
Lys Ile	Leu Lys	Leu Phe	Arg	Ala Thr	Pro Glu	Asp	Ala Gly	Arg
1415			1420			1425		
Tyr Ser	Cys Lys	Ala Ile	Asn	Ile Ala	Gly Thr	Ser	Gln Lys	Tyr
1430			1435			1440		
Phe Asn	Ile Asp	Val Leu	Val	Pro Pro	Thr Ile	Ile	Gly Thr	Asn
1445			1450			1455		

Phe	Pro	Asn	Glu	Val	Ser	Val	Val	Leu	Asn	Arg	Asp	Val	Ala	Leu
1460						1465					1470			
Glu	Cys	Gln	Val	Lys	Gly	Thr	Pro	Phe	Pro	Asp	Ile	His	Trp	Phe
1475						1480					1485			
Lys	Asp	Gly	Lys	Pro	Leu	Phe	Leu	Gly	Asp	Pro	Asn	Val	Glu	Leu
1490						1495					1500			
Leu	Asp	Arg	Gly	Gln	Val	Leu	His	Leu	Lys	Asn	Ala	Arg	Arg	Asn
1505						1510					1515			
Asp	Lys	Gly	Arg	Tyr	Gln	Cys	Thr	Val	Ser	Asn	Ala	Ala	Gly	Lys
1520						1525					1530			
Gln	Ala	Lys	Asp	Ile	Lys	Leu	Thr	Ile	Tyr	Ile	Pro	Pro	Ser	Ile
1535						1540					1545			
Lys	Gly	Gly	Asn	Val	Thr	Thr	Asp	Ile	Ser	Val	Leu	Ile	Asn	Ser
1550						1555					1560			
Leu	Ile	Lys	Leu	Glu	Cys	Glu	Thr	Arg	Gly	Leu	Pro	Met	Pro	Ala
1565						1570					1575			
Ile	Thr	Trp	Tyr	Lys	Asp	Gly	Gln	Pro	Ile	Met	Ser	Ser	Ser	Gln
1580						1585					1590			
Ala	Leu	Tyr	Ile	Asp	Lys	Gly	Gln	Tyr	Leu	His	Ile	Pro	Arg	Ala
1595						1600					1605			
Gln	Val	Ser	Asp	Ser	Ala	Thr	Tyr	Thr	Cys	His	Val	Ala	Asn	Val
1610						1615					1620			
Ala	Gly	Thr	Ala	Glu	Lys	Ser	Phe	His	Val	Asp	Val	Tyr	Val	Pro
1625						1630					1635			
Pro	Met	Ile	Glu	Gly	Asn	Leu	Ala	Thr	Pro	Leu	Asn	Lys	Gln	Val
1640						1645					1650			
Val	Ile	Ala	His	Ser	Leu	Thr	Leu	Glu	Cys	Lys	Ala	Ala	Gly	Asn
1655						1660					1665			

Pro Ser	Pro Ile Leu Thr Trp	Leu Lys Asp Gly Val	Pro Val Lys
1670	1675	1680	
Ala Asn	Asp Asn Ile Arg Ile	Glu Ala Gly Gly Lys	Lys Leu Glu
1685	1690	1695	
Ile Met	Ser Ala Gln Glu Ile	Asp Arg Gly Gln Tyr	Ile Cys Val
1700	1705	1710	
Ala Thr	Ser Val Ala Gly Glu	Lys Glu Ile Lys Tyr	Glu Val Asp
1715	1720	1725	
Val Leu	Val Pro Pro Ala Ile	Glu Gly Gly Asp Glu	Thr Ser Tyr
1730	1735	1740	
Phe Ile	Val Met Val Asn Asn	Leu Leu Glu Leu Asp	Cys His Val
1745	1750	1755	
Thr Gly	Ser Pro Pro Pro Thr	Ile Met Trp Leu Lys	Asp Gly Gln
1760	1765	1770	
Leu Ile	Asp Glu Arg Asp Gly	Phe Lys Ile Leu Leu	Asn Gly Arg
1775	1780	1785	
Lys Leu	Val Ile Ala Gln Ala	Gln Val Ser Asn Thr	Gly Leu Tyr
1790	1795	1800	
Arg Cys	Met Ala Ala Asn Thr	Ala Gly Asp His Lys	Lys Glu Phe
1805	1810	1815	
Glu Val	Thr Val His Val Pro	Pro Thr Ile Lys Ser	Ser Gly Leu
1820	1825	1830	
Ser Glu	Arg Val Val Val Lys	Tyr Lys Pro Val Ala	Leu Gln Cys
1835	1840	1845	
Ile Ala	Asn Gly Ile Pro Asn	Pro Ser Ile Thr Trp	Leu Lys Asp
1850	1855	1860	
Asp Gln	Pro Val Asn Thr Ala	Gln Gly Asn Leu Lys	Ile Gln Ser
1865	1870	1875	

Ser	Gly	Arg	Val	Leu	Gln	Ile	Ala	Lys	Thr	Leu	Leu	Glu	Asp	Ala
	1880					1885					1890			
Gly	Arg	Tyr	Thr	Cys	Val	Ala	Thr	Asn	Ala	Ala	Gly	Glu	Thr	Gln
	1895					1900					1905			
Gln	His	Ile	Gln	Leu	His	Val	His	Glu	Pro	Pro	Ser	Leu	Glu	Asp
	1910					1915					1920			
Ala	Gly	Lys	Met	Leu	Asn	Glu	Thr	Val	Leu	Val	Ser	Asn	Pro	Val
	1925					1930					1935			
Gln	Leu	Glu	Cys	Lys	Ala	Ala	Gly	Asn	Pro	Val	Pro	Val	Ile	Thr
	1940					1945					1950			
Trp	Tyr	Lys	Asp	Asn	Arg	Leu	Leu	Ser	Gly	Ser	Thr	Ser	Met	Thr
	1955					1960					1965			
Phe	Leu	Asn	Arg	Gly	Gln	Ile	Ile	Asp	Ile	Glu	Ser	Ala	Gln	Ile
	1970					1975					1980			
Ser	Asp	Ala	Gly	Ile	Tyr	Lys	Cys	Val	Ala	Ile	Asn	Ser	Ala	Gly
	1985					1990					1995			
Ala	Thr	Glu	Leu	Phe	Tyr	Ser	Leu	Gln	Val	His	Val	Ala	Pro	Ser
	2000					2005					2010			
Ile	Ser	Gly	Ser	Asn	Asn	Met	Val	Ala	Val	Val	Val	Asn	Asn	Pro
	2015					2020					2025			
Val	Arg	Leu	Glu	Cys	Glu	Ala	Arg	Gly	Ile	Pro	Ala	Pro	Ser	Leu
	2030					2035					2040			
Thr	Trp	Leu	Lys	Asp	Gly	Ser	Pro	Val	Ser	Ser	Phe	Ser	Asn	Gly
	2045					2050					2055			
Leu	Gln	Val	Leu	Ser	Gly	Gly	Arg	Ile	Leu	Ala	Leu	Thr	Ser	Ala
	2060					2065					2070			
Gln	Ile	Ser	Asp	Thr	Gly	Arg	Tyr	Thr	Cys	Val	Ala	Val	Asn	Ala
	2075					2080					2085			

Ala Gly	Glu Lys Gln Arg Asp	Ile Asp Leu Arg Val	Tyr Val Pro
2090	2095	2100	
Pro Asn	Ile Met Gly Glu Glu	Gln Asn Val Ser Val	Leu Ile Ser
2105	2110	2115	
Gln Ala	Val Glu Leu Leu Cys	Gln Ser Asp Ala Ile	Pro Pro Pro
2120	2125	2130	
Thr Leu	Thr Trp Leu Lys Asp	Gly His Pro Leu Leu	Lys Lys Pro
2135	2140	2145	
Gly Leu	Ser Ile Ser Glu Asn	Arg Ser Val Leu Lys	Ile Glu Asp
2150	2155	2160	
Ala Gln	Val Gln Asp Thr Gly	Arg Tyr Thr Cys Glu	Ala Thr Asn
2165	2170	2175	
Val Ala	Gly Lys Thr Glu Lys	Lys Asn Tyr Asn Val	Asn Ile Trp
2180	2185	2190	
Val Pro	Pro Asn Ile Gly Gly	Ser Asp Glu Leu Thr	Gln Leu Thr
2195	2200	2205	
Val Ile	Glu Gly Asn Leu Ile	Ser Leu Leu Cys Glu	Ser Ser Gly
2210	2215	2220	
Ile Pro	Pro Pro Asn Leu Ile	Trp Lys Lys Lys Gly	Ser Pro Val
2225	2230	2235	
Leu Thr	Asp Ser Met Gly Arg	Val Arg Ile Ile Ala	Glu Lys Ser
2240	2245	2250	
Asp Ala	Ala Leu Tyr Ser Cys	Val Ala Ser Asn Val	Ala Gly Thr
2255	2260	2265	
Ala Lys	Lys Glu Tyr Asn Leu	Gln Val Tyr Ile Arg	Pro Thr Ile
2270	2275	2280	
Thr Asn	Ser Gly Ser His Pro	Thr Glu Ile Ile Val	Thr Arg Gly
2285	2290	2295	

Lys	Ser	Ile	Ser	Leu	Glu	Cys	Glu	Val	Gln	Gly	Ile	Pro	Pro	Pro
2300						2305					2310			
Thr	Val	Thr	Trp	Met	Lys	Asp	Gly	His	Pro	Leu	Ile	Lys	Ala	Lys
2315						2320					2325			
Gly	Val	Glu	Ile	Leu	Asp	Glu	Gly	His	Ile	Leu	Gln	Leu	Lys	Asn
2330						2335					2340			
Ile	His	Val	Ser	Asp	Thr	Gly	Arg	Tyr	Val	Cys	Val	Ala	Val	Asn
2345						2350					2355			
Val	Ala	Gly	Met	Thr	Asp	Lys	Lys	Tyr	Asp	Leu	Ser	Val	His	Ala
2360						2365					2370			
Pro	Pro	Ser	Ile	Ile	Gly	Asn	His	Arg	Ser	Pro	Glu	Asn	Ile	Ser
2375						2380					2385			
Val	Val	Glu	Lys	Asn	Ser	Val	Ser	Leu	Thr	Cys	Glu	Ala	Ser	Gly
2390						2395					2400			
Ile	Pro	Leu	Pro	Ser	Ile	Thr	Trp	Phe	Lys	Asp	Gly	Trp	Pro	Val
2405						2410					2415			
Ser	Leu	Ser	Asn	Ser	Val	Arg	Ile	Leu	Ser	Gly	Gly	Arg	Met	Leu
2420						2425					2430			
Arg	Leu	Met	Gln	Thr	Thr	Met	Glu	Asp	Ala	Gly	Gln	Tyr	Thr	Cys
2435						2440					2445			
Val	Val	Arg	Asn	Ala	Ala	Gly	Glu	Glu	Arg	Lys	Ile	Phe	Gly	Leu
2450						2455					2460			
Ser	Val	Leu	Val	Pro	Pro	His	Ile	Val	Gly	Glu	Asn	Thr	Leu	Glu
2465						2470					2475			
Asp	Val	Lys	Val	Lys	Glu	Lys	Gln	Ser	Val	Thr	Leu	Thr	Cys	Glu
2480						2485					2490			
Val	Thr	Gly	Asn	Pro	Val	Pro	Glu	Ile	Thr	Trp	His	Lys	Asp	Gly
2495						2500					2505			

Gln Pro	Leu Gln Glu Asp	Glu	Ala His His Ile	Ile	Ser Gly Gly
2510		2515		2520	
Arg Phe	Leu Gln Ile Thr	Asn	Val Gln Val Pro	His	Thr Gly Arg
2525		2530		2535	
Tyr Thr	Cys Leu Ala Ser	Ser	Pro Ala Gly His	Lys	Ser Arg Ser
2540		2545		2550	
Phe Ser	Leu Asn Val Phe	Val	Ser Pro Thr Ile	Ala	Gly Val Gly
2555		2560		2565	
Ser Asp	Gly Asn Pro Glu	Asp	Val Thr Val Ile	Leu	Asn Ser Pro
2570		2575		2580	
Thr Ser	Leu Val Cys Glu	Ala	Tyr Ser Tyr Pro	Pro	Ala Thr Ile
2585		2590		2595	
Thr Trp	Phe Lys Asp Gly	Thr	Pro Leu Glu Ser	Asn	Arg Asn Ile
2600		2605		2610	
Arg Ile	Leu Pro Gly Gly	Arg	Thr Leu Gln Ile	Leu	Asn Ala Gln
2615		2620		2625	
Glu Asp	Asn Ala Gly Arg	Tyr	Ser Cys Val Ala	Thr	Asn Glu Ala
2630		2635		2640	
Gly Glu	Met Ile Lys His	Tyr	Glu Val Lys Val	Tyr	Ile Pro Pro
2645		2650		2655	
Ile Ile	Asn Lys Gly Asp	Leu	Trp Gly Pro Gly	Leu	Ser Pro Lys
2660		2665		2670	
Glu Val	Lys Ile Lys Val	Asn	Asn Thr Leu Thr	Leu	Glu Cys Glu
2675		2680		2685	
Ala Tyr	Ala Ile Pro Ser	Ala	Ser Leu Ser Trp	Tyr	Lys Asp Gly
2690		2695		2700	
Gln Pro	Leu Lys Ser Asp	Asp	His Val Asn Ile	Ala	Ala Asn Gly
2705		2710		2715	

His Thr	Leu Gln Ile Lys	Glu	Ala Gln Ile Ser	Asp	Thr Gly Arg
2720		2725		2730	
Tyr Thr	Cys Val Ala Ser	Asn	Ile Ala Gly Glu	Asp	Glu Leu Asp
2735		2740		2745	
Phe Asp	Val Asn Ile Gln	Val	Pro Pro Ser Phe	Gln	Lys Leu Trp
2750		2755		2760	
Glu Ile	Gly Asn Met Leu	Asp	Thr Gly Arg Asn	Gly	Glu Ala Lys
2765		2770		2775	
Asp Val	Ile Ile Asn Asn	Pro	Ile Ser Leu Tyr	Cys	Glu Thr Asn
2780		2785		2790	
Ala Ala	Pro Pro Pro Thr	Leu	Thr Trp Tyr Lys	Asp	Gly His Pro
2795		2800		2805	
Leu Thr	Ser Ser Asp Lys	Val	Leu Ile Leu Pro	Gly	Gly Arg Val
2810		2815		2820	
Leu Gln	Ile Pro Arg Ala	Lys	Val Glu Asp Ala	Gly	Arg Tyr Thr
2825		2830		2835	
Cys Val	Ala Val Asn Glu	Ala	Gly Glu Asp Ser	Leu	Gln Tyr Asp
2840		2845		2850	
Val Arg	Val Leu Val Pro	Pro	Ile Ile Lys Gly	Ala	Asn Ser Asp
2855		2860		2865	
Leu Pro	Glu Glu Val Thr	Val	Leu Val Asn Lys	Ser	Ala Leu Ile
2870		2875		2880	
Glu Cys	Leu Ser Ser Gly	Ser	Pro Ala Pro Arg	Asn	Ser Trp Gln
2885		2890		2895	
Lys Asp	Gly Gln Pro Leu	Leu	Glu Asp Asp His	His	Lys Phe Leu
2900		2905		2910	
Ser Asn	Gly Arg Ile Leu	Gln	Ile Leu Asn Thr	Gln	Ile Thr Asp
2915		2920		2925	

Ile Gly	Arg Tyr Val Cys Val	Ala Glu Asn Thr	Ala Gly Ser Ala
2930	2935	2940	
Lys Lys	Tyr Phe Asn Leu Asn	Val His Val Pro	Pro Ser Val Ile
2945	2950	2955	
Gly Pro	Lys Ser Glu Asn Leu	Thr Val Val Val	Asn Asn Phe Ile
2960	2965	2970	
Ser Leu	Thr Cys Glu Val Ser	Gly Phe Pro Pro	Pro Asp Leu Ser
2975	2980	2985	
Trp Leu	Lys Asn Lys Leu Asn	Thr Asn Thr Leu	Ile Val Pro Gly
2990	2995	3000	
Gly Arg	Thr Leu Gln Ile Ile	Arg Ala Lys Val	Ser Asp Gly Gly
3005	3010	3015	
Glu Tyr	Thr Cys Ile Ala Ile	Asn Gln Ala Gly	Glu Ser Lys Lys
3020	3025	3030	
Lys Phe	Ser Leu Thr Val Tyr	Val Pro Pro Ser	Ile Lys Asp His
3035	3040	3045	
Asp Ser	Glu Ser Leu Ser Val	Val Asn Val Arg	Glu Gly Thr Ser
3050	3055	3060	
Val Ser	Leu Glu Cys Glu Ser	Asn Ala Val Pro	Pro Pro Val Ile
3065	3070	3075	
Thr Trp	Tyr Lys Asn Gly Arg	Met Ile Thr Glu	Ser Thr His Val
3080	3085	3090	
Glu Ile	Leu Ala Asp Gly Gln	Met Leu His Ile	Lys Lys Ala Glu
3095	3100	3105	
Val Ser	Asp Thr Gly Gln Tyr	Val Cys Arg Ala	Ile Asn Val Ala
3110	3115	3120	
Gly Arg	Asp Asp Lys Asn Phe	His Leu Asn Val	Tyr Val Pro Pro
3125	3130	3135	

Ser	Ile	Glu	Gly	Pro	Glu	Arg	Glu	Val	Ile	Val	Glu	Thr	Ile	Ser
3140						3145					3150			
Asn	Pro	Val	Thr	Leu	Thr	Cys	Asp	Ala	Thr	Gly	Ile	Pro	Pro	Pro
3155						3160					3165			
Thr	Ile	Ala	Trp	Leu	Lys	Asn	His	Lys	Arg	Ile	Glu	Asn	Ser	Asp
3170						3175					3180			
Ser	Leu	Glu	Val	Arg	Ile	Leu	Ser	Gly	Gly	Ser	Lys	Leu	Gln	Ile
3185						3190					3195			
Ala	Arg	Ser	Gln	His	Ser	Asp	Ser	Gly	Asn	Tyr	Thr	Cys	Ile	Ala
3200						3205					3210			
Ser	Asn	Met	Glu	Gly	Lys	Ala	Gln	Lys	Tyr	Tyr	Phe	Leu	Ser	Ile
3215						3220					3225			
Gln	Val	Pro	Pro	Ser	Val	Ala	Gly	Ala	Glu	Ile	Pro	Ser	Asp	Val
3230						3235					3240			
Ser	Val	Leu	Leu	Gly	Glu	Asn	Val	Glu	Leu	Val	Cys	Asn	Ala	Asn
3245						3250					3255			
Gly	Ile	Pro	Thr	Pro	Leu	Ile	Gln	Trp	Leu	Lys	Asp	Gly	Lys	Pro
3260						3265					3270			
Ile	Ala	Ser	Gly	Glu	Thr	Glu	Arg	Ile	Arg	Val	Ser	Ala	Asn	Gly
3275						3280					3285			
Ser	Thr	Leu	Asn	Ile	Tyr	Gly	Ala	Leu	Thr	Ser	Asp	Thr	Gly	Lys
3290						3295					3300			
Tyr	Thr	Cys	Val	Ala	Thr	Asn	Pro	Ala	Gly	Glu	Glu	Asp	Arg	Ile
3305						3310					3315			
Phe	Asn	Leu	Asn	Val	Tyr	Val	Thr	Pro	Thr	Ile	Arg	Gly	Asn	Lys
3320						3325					3330			
Asp	Glu	Ala	Glu	Lys	Leu	Met	Thr	Leu	Val	Asp	Thr	Ser	Ile	Asn
3335						3340					3345			

Ile Glu Cys Arg Ala Thr Gly Thr Pro Pro Pro Gln Ile Asn Trp 3350 3355 3360
Leu Lys Asn Gly Leu Pro Leu Pro Leu Ser Ser His Ile Arg Leu 3365 3370 3375
Leu Ala Ala Gly Gln Val Ile Arg Ile Val Arg Ala Gln Val Ser 3380 3385 3390
Asp Val Ala Val Tyr Thr Cys Val Ala Ser Asn Arg Ala Gly Val 3395 3400 3405
Asp Asn Lys His Tyr Asn Leu Gln Val Phe Ala Pro Pro Asn Met 3410 3415 3420
Asp Asn Ser Met Gly Thr Glu Glu Ile Thr Val Leu Lys Gly Ser 3425 3430 3435
Ser Thr Ser Met Ala Cys Ile Thr Asp Gly Thr Pro Ala Pro Ser 3440 3445 3450
Met Ala Trp Leu Arg Asp Gly Gln Pro Leu Gly Leu Asp Ala His 3455 3460 3465
Leu Thr Val Ser Thr His Gly Met Val Leu Gln Leu Leu Lys Ala 3470 3475 3480
Glu Thr Glu Asp Ser Gly Lys Tyr Thr Cys Ile Ala Ser Asn Glu 3485 3490 3495
Ala Gly Glu Val Ser Lys His Phe Ile Leu Lys Val Leu Glu Pro 3500 3505 3510
Pro His Ile Asn Gly Ser Glu Glu His Glu Glu Ile Ser Val Ile 3515 3520 3525
Val Asn Asn Pro Leu Glu Leu Thr Cys Ile Ala Ser Gly Ile Pro 3530 3535 3540
Ala Pro Lys Met Thr Trp Met Lys Asp Gly Arg Pro Leu Pro Gln 3545 3550 3555

Thr	Asp	Gln	Val	Gln	Thr	Leu	Gly	Gly	Gly	Glu	Val	Leu	Arg	Ile
3560						3565					3570			
Ser	Thr	Ala	Gln	Val	Glu	Asp	Thr	Gly	Arg	Tyr	Thr	Cys	Leu	Ala
3575						3580					3585			
Ser	Ser	Pro	Ala	Gly	Asp	Asp	Asp	Lys	Glu	Tyr	Leu	Val	Arg	Val
3590						3595					3600			
His	Val	Pro	Pro	Asn	Ile	Ala	Gly	Thr	Asp	Glu	Pro	Arg	Asp	Ile
3605						3610					3615			
Thr	Val	Leu	Arg	Asn	Arg	Gln	Val	Thr	Leu	Glu	Cys	Lys	Ser	Asp
3620						3625					3630			
Ala	Val	Pro	Pro	Pro	Val	Ile	Thr	Trp	Leu	Arg	Asn	Gly	Glu	Arg
3635						3640					3645			
Leu	Gln	Ala	Thr	Pro	Arg	Val	Arg	Ile	Leu	Ser	Gly	Gly	Arg	Tyr
3650						3655					3660			
Leu	Gln	Ile	Asn	Asn	Ala	Asp	Leu	Gly	Asp	Thr	Ala	Asn	Tyr	Thr
3665						3670					3675			
Cys	Val	Ala	Ser	Asn	Ile	Ala	Gly	Lys	Thr	Thr	Arg	Glu	Phe	Ile
3680						3685					3690			
Leu	Thr	Val	Asn	Val	Pro	Pro	Asn	Ile	Lys	Gly	Gly	Pro	Gln	Ser
3695						3700					3705			
Leu	Val	Ile	Leu	Leu	Asn	Lys	Ser	Thr	Val	Leu	Glu	Cys	Ile	Ala
3710						3715					3720			
Glu	Gly	Val	Pro	Thr	Pro	Arg	Ile	Thr	Trp	Arg	Lys	Asp	Gly	Ala
3725						3730					3735			
Val	Leu	Ala	Gly	Asn	His	Ala	Arg	Tyr	Ser	Ile	Leu	Glu	Asn	Gly
3740						3745					3750			
Phe	Leu	His	Ile	Gln	Ser	Ala	His	Val	Thr	Asp	Thr	Gly	Arg	Tyr
3755						3760					3765			

Leu Cys Met Ala Thr Asn Ala Ala Gly Thr Asp Arg Arg Arg Ile		
3770	3775	3780
Asp Leu Gln Val His Val Pro Pro Ser Ile Ala Pro Gly Pro Thr		
3785	3790	3795
Asn Met Thr Val Ile Val Asn Val Gln Thr Thr Leu Ala Cys Glu		
3800	3805	3810
Ala Thr Gly Ile Pro Lys Pro Ser Ile Asn Trp Arg Lys Asn Gly		
3815	3820	3825
His Leu Leu Asn Val Asp Gln Asn Gln Asn Ser Tyr Arg Leu Leu		
3830	3835	3840
Ser Ser Gly Ser Leu Val Ile Ile Ser Pro Ser Val Asp Asp Thr		
3845	3850	3855
Ala Thr Tyr Glu Cys Thr Val Thr Asn Gly Ala Gly Asp Asp Lys		
3860	3865	3870
Arg Thr Val Asp Leu Thr Val Gln Val Pro Pro Ser Ile Ala Asp		
3875	3880	3885
Glu Pro Thr Asp Phe Leu Val Thr Lys His Ala Pro Ala Val Ile		
3890	3895	3900
Thr Cys Thr Ala Ser Gly Val Pro Phe Pro Ser Ile His Trp Thr		
3905	3910	3915
Lys Asn Gly Ile Arg Leu Leu Pro Arg Gly Asp Gly Tyr Arg Ile		
3920	3925	3930
Leu Ser Ser Gly Ala Ile Glu Ile Leu Ala Thr Gln Leu Asn His		
3935	3940	3945
Ala Gly Arg Tyr Thr Cys Val Ala Arg Asn Ala Ala Gly Ser Ala		
3950	3955	3960
His Arg His Val Thr Leu His Val His Glu Pro Pro Val Ile Gln		
3965	3970	3975

Pro Gln	Pro Ser Glu Leu His	Val Ile Leu Asn Asn	Pro Ile Leu
3980	3985	3990	
Leu Pro	Cys Glu Ala Thr Gly	Thr Pro Ser Pro Phe	Ile Thr Trp
3995	4000	4005	
Gln Lys	Glu Gly Ile Asn Val	Asn Thr Ser Gly Arg	Asn His Ala
4010	4015	4020	
Val Leu	Pro Ser Gly Gly Leu	Gln Ile Ser Arg Ala	Val Arg Glu
4025	4030	4035	
Asp Ala	Gly Thr Tyr Met Cys	Val Ala Gln Asn Pro	Ala Gly Thr
4040	4045	4050	
Ala Leu	Gly Lys Ile Lys Leu	Asn Val Gln Val Pro	Pro Val Ile
4055	4060	4065	
Ser Pro	His Leu Lys Glu Tyr	Val Ile Ala Val Asp	Lys Pro Ile
4070	4075	4080	
Thr Leu	Ser Cys Glu Ala Asp	Gly Leu Pro Pro Pro	Asp Ile Thr
4085	4090	4095	
Trp His	Lys Asp Gly Arg Ala	Ile Val Glu Ser Ile	Arg Gln Arg
4100	4105	4110	
Val Leu	Ser Ser Gly Ser Leu	Gln Ile Ala Phe Val	Gln Pro Gly
4115	4120	4125	
Asp Ala	Gly His Tyr Thr Cys	Met Ala Ala Asn Val	Ala Gly Ser
4130	4135	4140	
Ser Ser	Thr Ser Thr Lys Leu	Thr Val His Val Pro	Pro Arg Ile
4145	4150	4155	
Arg Ser	Thr Glu Gly His Tyr	Thr Val Asn Glu Asn	Ser Gln Ala
4160	4165	4170	
Ile Leu	Pro Cys Val Ala Asp	Gly Ile Pro Thr Pro	Ala Ile Asn
4175	4180	4185	

Trp Lys	Lys Asp Asn Val	Leu	Leu Ala Asn Leu	Leu	Gly Lys Tyr
4190		4195		4200	
Thr Ala	Glu Pro Tyr Gly	Glu	Leu Ile Leu Glu	Asn	Val Val Leu
4205		4210		4215	
Glu Asp	Ser Gly Phe Tyr	Thr	Cys Val Ala Asn	Asn	Ala Ala Gly
4220		4225		4230	
Glu Asp	Thr His Thr Val	Ser	Leu Thr Val His	Val	Leu Pro Thr
4235		4240		4245	
Phe Thr	Glu Leu Pro Gly	Asp	Val Ser Leu Asn	Lys	Gly Glu Gln
4250		4255		4260	
Leu Arg	Leu Ser Cys Lys	Ala	Thr Gly Ile Pro	Leu	Pro Lys Leu
4265		4270		4275	
Thr Trp	Thr Phe Asn Asn	Asn	Ile Ile Pro Ala	His	Phe Asp Ser
4280		4285		4290	
Val Asn	Gly His Ser Glu	Leu	Val Ile Glu Arg	Val	Ser Lys Glu
4295		4300		4305	
Asp Ser	Gly Thr Tyr Val	Cys	Thr Ala Glu Asn	Ser	Val Gly Phe
4310		4315		4320	
Val Lys	Ala Ile Gly Phe	Val	Tyr Val Lys Glu	Pro	Pro Val Phe
4325		4330		4335	
Lys Gly	Asp Tyr Pro Ser	Asn	Trp Ile Glu Pro	Leu	Gly Gly Asn
4340		4345		4350	
Ala Ile	Leu Asn Cys Glu	Val	Lys Gly Asp Pro	Thr	Pro Thr Ile
4355		4360		4365	
Gln Trp	Asn Arg Lys Gly	Val	Asp Ile Glu Ile	Ser	His Arg Ile
4370		4375		4380	
Arg Gln	Leu Gly Asn Gly	Ser	Leu Ala Ile Tyr	Gly	Thr Val Asn
4385		4390		4395	

Glu Asp	Ala Gly Asp Tyr	Thr	Cys Val Ala Thr	Asn	Glu Ala Gly
4400		4405		4410	
Val Val	Glu Arg Ser Met	Ser	Leu Thr Leu Gln	Ser	Pro Pro Ile
4415		4420		4425	
Ile Thr	Leu Glu Pro Val	Glu	Thr Val Ile Asn	Ala	Gly Gly Lys
4430		4435		4440	
Ile Ile	Leu Asn Cys Gln	Ala	Thr Gly Glu Pro	Gln	Pro Thr Ile
4445		4450		4455	
Thr Trp	Ser Arg Gln Gly	His	Ser Ile Ser Trp	Asp	Asp Arg Val
4460		4465		4470	
Asn Val	Leu Ser Asn Asn	Ser	Leu Tyr Ile Ala	Asp	Ala Gln Lys
4475		4480		4485	
Glu Asp	Thr Ser Glu Phe	Glu	Cys Val Ala Arg	Asn	Leu Met Gly
4490		4495		4500	
Ser Val	Leu Val Arg Val	Pro	Val Ile Val Gln	Val	His Gly Gly
4505		4510		4515	
Phe Ser	Gln Trp Ser Ala	Trp	Arg Ala Cys Ser	Val	Thr Cys Gly
4520		4525		4530	
Lys Gly	Ile Gln Lys Arg	Ser	Arg Leu Cys Asn	Gln	Pro Leu Pro
4535		4540		4545	
Ala Asn	Gly Gly Lys Pro	Cys	Gln Gly Ser Asp	Leu	Glu Met Arg
4550		4555		4560	
Asn Cys	Gln Asn Lys Pro	Cys	Pro Val Asp Gly	Ser	Trp Ser Glu
4565		4570		4575	
Trp Ser	Leu Trp Glu Glu	Cys	Thr Arg Ser Cys	Gly	Arg Gly Asn
4580		4585		4590	
Gln Thr	Arg Thr Arg Thr	Cys	Asn Asn Pro Ser	Val	Gln His Gly
4595		4600		4605	

Gly	Arg	Pro	Cys	Glu	Gly	Asn	Ala	Val	Glu	Ile	Ile	Met	Cys	Asn
4610						4615						4620		
Ile	Arg	Pro	Cys	Pro	Val	His	Gly	Ala	Trp	Ser	Ala	Trp	Gln	Pro
4625						4630					4635			
Trp	Gly	Thr	Cys	Ser	Glu	Ser	Cys	Gly	Lys	Gly	Thr	Gln	Thr	Arg
4640						4645					4650			
Ala	Arg	Leu	Cys	Asn	Asn	Pro	Pro	Pro	Ala	Phe	Gly	Gly	Ser	Tyr
4655						4660					4665			
Cys	Asp	Gly	Ala	Glu	Thr	Gln	Met	Gln	Val	Cys	Asn	Glu	Arg	Asn
4670						4675					4680			
Cys	Pro	Ile	His	Gly	Lys	Trp	Ala	Thr	Trp	Ala	Ser	Trp	Ser	Ala
4685						4690					4695			
Cys	Ser	Val	Ser	Cys	Gly	Gly	Gly	Ala	Arg	Gln	Arg	Thr	Arg	Gly
4700						4705					4710			
Cys	Ser	Asp	Pro	Val	Pro	Gln	Tyr	Gly	Gly	Arg	Lys	Cys	Glu	Gly
4715						4720					4725			
Ser	Asp	Val	Gln	Ser	Asp	Phe	Cys	Asn	Ser	Asp	Pro	Cys	Pro	Thr
4730						4735					4740			
His	Gly	Asn	Trp	Ser	Pro	Trp	Ser	Gly	Trp	Gly	Thr	Cys	Ser	Arg
4745						4750					4755			
Thr	Cys	Asn	Gly	Gly	Gln	Met	Arg	Arg	Tyr	Arg	Thr	Cys	Asp	Asn
4760						4765					4770			
Pro	Pro	Pro	Ser	Asn	Gly	Gly	Arg	Ala	Cys	Gly	Gly	Pro	Asp	Ser
4775						4780					4785			
Gln	Ile	Gln	Arg	Cys	Asn	Thr	Asp	Met	Cys	Pro	Val	Asp	Gly	Ser
4790						4795					4800			
Trp	Gly	Ser	Trp	His	Ser	Trp	Ser	Gln	Cys	Ser	Ala	Ser	Cys	Gly
4805						4810					4815			

Gly	Gly	Glu	Lys	Thr	Arg	Lys	Arg	Leu	Cys	Asp	His	Pro	Val	Pro
4820						4825					4830			
Val	Lys	Gly	Gly	Arg	Pro	Cys	Pro	Gly	Asp	Thr	Thr	Gln	Val	Thr
4835						4840					4845			
Arg	Cys	Asn	Val	Gln	Ala	Cys	Pro	Gly	Gly	Pro	Gln	Arg	Ala	Arg
4850						4855					4860			
Gly	Ser	Val	Ile	Gly	Asn	Ile	Asn	Asp	Val	Glu	Phe	Gly	Ile	Ala
4865						4870					4875			
Phe	Leu	Asn	Ala	Thr	Ile	Thr	Asp	Ser	Pro	Asn	Ser	Asp	Thr	Arg
4880						4885					4890			
Ile	Ile	Arg	Ala	Lys	Ile	Thr	Asn	Val	Pro	Arg	Ser	Leu	Gly	Ser
4895						4900					4905			
Ala	Met	Arg	Lys	Ile	Val	Ser	Ile	Leu	Asn	Pro	Ile	Tyr	Trp	Thr
4910						4915					4920			
Thr	Ala	Lys	Glu	Ile	Gly	Glu	Ala	Val	Asn	Gly	Phe	Thr	Leu	Thr
4925						4930					4935			
Asn	Ala	Val	Phe	Lys	Arg	Glu	Thr	Gln	Val	Glu	Phe	Ala	Thr	Gly
4940						4945					4950			
Glu	Ile	Leu	Gln	Met	Ser	His	Ile	Ala	Arg	Gly	Leu	Asp	Ser	Asp
4955						4960					4965			
Gly	Ser	Leu	Leu	Leu	Asp	Ile	Val	Val	Ser	Gly	Tyr	Val	Leu	Gln
4970						4975					4980			
Leu	Gln	Ser	Pro	Ala	Glu	Val	Thr	Val	Lys	Asp	Tyr	Thr	Glu	Asp
4985						4990					4995			
Tyr	Ile	Gln	Thr	Gly	Pro	Gly	Gln	Leu	Tyr	Ala	Tyr	Ser	Thr	Arg
5000						5005					5010			
Leu	Phe	Thr	Ile	Asp	Gly	Ile	Ser	Ile	Pro	Tyr	Thr	Trp	Asn	His
5015						5020					5025			

Thr Val	Phe Tyr Asp Gln Ala	Gln Gly Arg Met Pro	Phe Leu Val
5030	5035	5040	
Glu Thr	Leu His Ala Ser Ser	Val Glu Ser Asp Tyr	Asn Gln Ile
5045	5050	5055	
Glu Glu	Thr Leu Gly Phe Lys	Ile His Ala Ser Ile	Ser Lys Gly
5060	5065	5070	
Asp Arg	Ser Asn Gln Cys Pro	Ser Gly Phe Thr Leu	Asp Ser Val
5075	5080	5085	
Gly Pro	Phe Cys Ala Asp Glu	Asp Glu Cys Ala Ala	Gly Asn Pro
5090	5095	5100	
Cys Ser	His Ser Cys His Asn	Ala Met Gly Thr Tyr	Tyr Cys Ser
5105	5110	5115	
Cys Pro	Lys Gly Leu Thr Ile	Ala Ala Asp Gly Arg	Thr Cys Gln
5120	5125	5130	
Asp Ile	Asp Glu Cys Ala Leu	Gly Arg His Thr Cys	His Ala Gly
5135	5140	5145	
Gln Asp	Cys Asp Asn Thr Ile	Gly Ser Tyr Arg Cys	Val Val Arg
5150	5155	5160	
Cys Gly	Ser Gly Phe Arg Arg	Thr Ser Asp Gly Leu	Ser Cys Gln
5165	5170	5175	
Asp Ile	Asn Glu Cys Gln Glu	Ser Ser Pro Cys His	Gln Arg Cys
5180	5185	5190	
Phe Asn	Ala Ile Gly Ser Phe	His Cys Gly Cys Glu	Pro Gly Tyr
5195	5200	5205	
Gln Leu	Lys Gly Arg Lys Cys	Met Asp Val Asn Glu	Cys Arg Gln
5210	5215	5220	
Asn Val	Cys Arg Pro Asp Gln	His Cys Lys Asn Thr	Arg Gly Gly
5225	5230	5235	

Tyr	Lys	Cys	Ile	Asp	Leu	Cys	Pro	Asn	Gly	Met	Thr	Lys	Ala	Glu
5240						5245					5250			
Asn	Gly	Thr	Cys	Ile	Asp	Ile	Asp	Glu	Cys	Lys	Asp	Gly	Thr	His
5255						5260					5265			
Gln	Cys	Arg	Tyr	Asn	Gln	Ile	Cys	Glu	Asn	Thr	Arg	Gly	Ser	Tyr
5270						5275					5280			
Arg	Cys	Val	Cys	Pro	Arg	Gly	Tyr	Arg	Ser	Gln	Gly	Val	Gly	Arg
5285						5290					5295			
Pro	Cys	Met	Asp	Ile	Asn	Glu	Cys	Glu	Gln	Val	Pro	Lys	Pro	Cys
5300						5305					5310			
Ala	His	Gln	Cys	Ser	Asn	Thr	Pro	Gly	Ser	Phe	Lys	Cys	Ile	Cys
5315						5320					5325			
Pro	Pro	Gly	Gln	His	Leu	Leu	Gly	Asp	Gly	Lys	Ser	Cys	Ala	Gly
5330						5335					5340			
Leu	Glu	Arg	Leu	Pro	Asn	Tyr	Gly	Thr	Gln	Tyr	Ser	Ser	Tyr	Asn
5345						5350					5355			
Leu	Ala	Arg	Phe	Ser	Pro	Val	Arg	Asn	Asn	Tyr	Gln	Pro	Gln	Gln
5360						5365					5370			
His	Tyr	Arg	Gln	Tyr	Ser	His	Leu	Tyr	Ser	Ser	Tyr	Ser	Glu	Tyr
5375						5380					5385			
Arg	Asn	Ser	Arg	Thr	Ser	Leu	Ser	Arg	Thr	Arg	Arg	Thr	Ile	Arg
5390						5395					5400			
Lys	Thr	Cys	Pro	Glu	Gly	Ser	Glu	Ala	Ser	His	Asp	Thr	Cys	Val
5405						5410					5415			
Asp	Ile	Asp	Glu	Cys	Glu	Asn	Thr	Asp	Ala	Cys	Gln	His	Glu	Cys
5420						5425					5430			
Lys	Asn	Thr	Phe	Gly	Ser	Tyr	Gln	Cys	Ile	Cys	Pro	Pro	Gly	Tyr
5435						5440					5445			

Gln Leu Thr His Asn Gly Lys Thr Cys Gln Asp Ile Asp Glu Cys
 5450 5455 5460

Leu Glu Gln Asn Val His Cys Gly Pro Asn Arg Met Cys Phe Asn
 5465 5470 5475

Met Arg Gly Ser Tyr Gln Cys Ile Asp Thr Pro Cys Pro Pro Asn
 5480 5485 5490

Tyr Gln Arg Asp Pro Val Ser Gly Phe Cys Leu Lys Asn Cys Pro
 5495 5500 5505

Pro Asn Asp Leu Glu Cys Ala Leu Ser Pro Tyr Ala Leu Glu Tyr
 5510 5515 5520

Lys Leu Val Ser Leu Pro Phe Gly Ile Ala Thr Asn Gln Asp Leu
 5525 5530 5535

Ile Arg Leu Val Ala Tyr Thr Gln Asp Gly Val Met His Pro Arg
 5540 5545 5550

Thr Thr Phe Leu Met Val Asp Glu Glu Gln Thr Val Pro Phe Ala
 5555 5560 5565

Leu Arg Asp Glu Asn Leu Lys Gly Val Val Tyr Thr Thr Arg Pro
 5570 5575 5580

Leu Arg Glu Ala Glu Thr Tyr Arg Met Arg Val Arg Ala Ser Ser
 5585 5590 5595

Tyr Ser Ala Asn Gly Thr Ile Glu Tyr Gln Thr Thr Phe Ile Val
 5600 5605 5610

Tyr Ile Ala Val Ser Ala Tyr Pro Tyr
 5615 5620

<210> 129

<211> 222

<212> PRT

<213> Homo sapiens

<400> 129

Met Leu Ser Arg Ala Val Cys Gly Thr Ser Arg Gln Leu Pro Pro Val
 1 5 10 15

Leu Gly Tyr Leu Gly Ser Arg Gln Lys His Ser Leu Pro Asp Leu Pro
 20 25 30

Tyr Asp Tyr Gly Ala Leu Glu Pro His Ile Asn Ala Gln Ile Met Gln
 35 40 45

Leu His His Ser Lys His His Ala Ala Tyr Val Asn Asn Leu Asn Val
 50 55 60

Thr Glu Glu Lys Tyr Gln Glu Ala Leu Ala Lys Gly Asp Val Thr Ala
 65 70 75 80

Gln Ile Ala Leu Gln Pro Ala Leu Lys Phe Asn Gly Gly Gly His Ile
 85 90 95

Asn His Ser Ile Phe Trp Thr Asn Leu Ser Pro Asn Gly Gly Gly Glu
 100 105 110

Pro Lys Gly Glu Leu Leu Glu Ala Ile Lys Leu Asp Phe Gly Ser Phe
 115 120 125

Asp Lys Phe Lys Glu Lys Leu Thr Ala Ala Ser Val Gly Val Gln Gly
 130 135 140

Ser Gly Trp Gly Trp Leu Gly Phe Asn Lys Glu Arg Gly His Leu Gln
 145 150 155 160

Ile Ala Ala Cys Pro Asn Gln Asp Pro Leu Gln Gly Thr Thr Gly Leu
 165 170 175

Ile Pro Leu Leu Gly Ile Asp Val Trp Glu His Ala Tyr Tyr Leu Gln
 180 185 190

Tyr Lys Asn Val Arg Pro Asp Tyr Leu Lys Ala Ile Trp Asn Val Ile
 195 200 205

Asn Trp Glu Asn Val Thr Glu Arg Tyr Met Ala Cys Lys Lys
 210 215 220

<210> 130

<211> 99

<212> PRT

<213> Homo sapiens

<400> 130

Met Lys Val Ser Ala Ala Leu Leu Cys Leu Leu Leu Ile Ala Ala Thr
 1 5 10 15

Phe Ile Pro Gln Gly Leu Ala Gln Pro Asp Ala Ile Asn Ala Pro Val
 20 25 30

Thr Cys Cys Tyr Asn Phe Thr Asn Arg Lys Ile Ser Val Gln Arg Leu
 35 40 45

Ala Ser Tyr Arg Arg Ile Thr Ser Ser Lys Cys Pro Lys Glu Ala Val
 50 55 60

Ile Phe Lys Thr Ile Val Ala Lys Glu Ile Cys Ala Asp Pro Lys Gln
 65 70 75 80

Lys Trp Val Gln Asp Ser Met Asp His Leu Asp Lys Gln Thr Gln Thr
 85 90 95

Pro Lys Thr

<210> 131

<211> 355

<212> PRT

<213> Homo sapiens

<400> 131

Met Ala Lys Leu Ile Ala Leu Thr Leu Leu Gly Met Gly Leu Ala Leu
 1 5 10 15

Phe Arg Asn His Gln Ser Ser Tyr Gln Thr Arg Leu Asn Ala Leu Arg
 20 25 30

Glu Val Gln Pro Val Glu Leu Pro Asn Cys Asn Leu Val Lys Gly Ile
 35 40 45

Glu Thr Gly Ser Glu Asp Leu Glu Ile Leu Pro Asn Gly Leu Ala Phe
 50 55 60

Ile Ser Ser Gly Leu Lys Tyr Pro Gly Ile Lys Ser Phe Asn Pro Asn
 65 70 75 80

Ser	Pro	Gly	Lys	Ile	Leu	Leu	Met	Asp	Leu	Asn	Glu	Glu	Asp	Pro	Thr	
				85					90					95		
Val	Leu	Glu	Leu	Gly	Ile	Thr	Gly	Ser	Lys	Phe	Asp	Val	Ser	Ser	Phe	
			100					105					110			
Asn	Pro	His	Gly	Ile	Ser	Thr	Phe	Thr	Asp	Glu	Asp	Asn	Ala	Met	Tyr	
		115					120					125				
Leu	Leu	Val	Val	Asn	His	Pro	Asp	Ala	Lys	Ser	Thr	Val	Glu	Leu	Phe	
	130					135						140				
Lys	Phe	Gln	Glu	Glu	Glu	Lys	Ser	Leu	Leu	His	Leu	Lys	Thr	Ile	Arg	
145					150					155					160	
His	Lys	Leu	Leu	Pro	Asn	Leu	Asn	Asp	Ile	Val	Ala	Val	Gly	Pro	Glu	
				165					170					175		
His	Phe	Tyr	Gly	Thr	Asn	Asp	His	Tyr	Phe	Leu	Asp	Pro	Tyr	Leu	Gln	
			180					185					190			
Ser	Trp	Glu	Met	Tyr	Leu	Gly	Leu	Ala	Trp	Ser	Tyr	Val	Val	Tyr	Tyr	
		195					200					205				
Ser	Pro	Ser	Glu	Val	Arg	Val	Val	Ala	Glu	Gly	Phe	Asp	Phe	Ala	Asn	
	210					215					220					
Gly	Ile	Asn	Ile	Ser	Pro	Asp	Gly	Lys	Tyr	Val	Tyr	Ile	Ala	Glu	Leu	
225					230					235					240	
Leu	Ala	His	Lys	Ile	His	Val	Tyr	Glu	Lys	His	Ala	Asn	Trp	Thr	Leu	
				245					250					255		
Thr	Pro	Leu	Lys	Ser	Leu	Asp	Phe	Asn	Thr	Leu	Val	Asp	Asn	Ile	Ser	
			260					265					270			
Val	Asp	Pro	Glu	Thr	Gly	Asp	Leu	Trp	Val	Gly	Cys	His	Pro	Asn	Gly	
		275					280					285				
Met	Lys	Ile	Phe	Phe	Tyr	Asp	Ser	Glu	Asn	Pro	Pro	Ala	Ser	Glu	Val	
	290					295					300					

Leu Arg Ile Gln Asn Ile Leu Thr Glu Glu Pro Lys Val Thr Gln Val
305 310 315 320

Tyr Ala Glu Asn Gly Thr Val Leu Gln Gly Ser Thr Val Ala Ser Val
325 330 335

Tyr Lys Gly Lys Leu Leu Ile Gly Thr Val Phe His Lys Ala Leu Tyr
340 345 350

Cys Glu Leu
355